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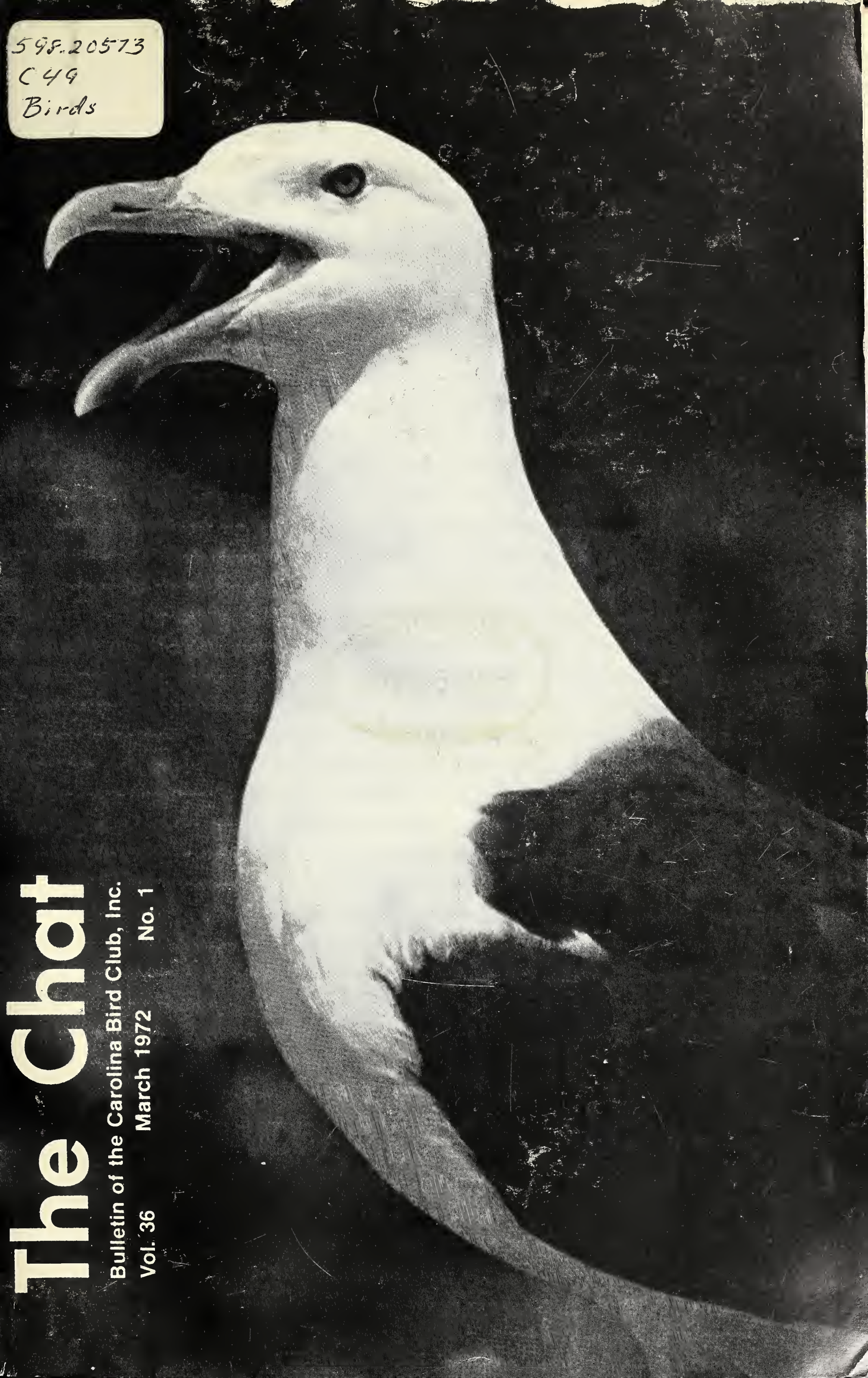

The Chat

Bulletin of the Carolina Bird Club, Inc.

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The Chat

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OUR COVER—An adult Great Black-backed Gull posed for Mike Browne on the Outer Banks of North Carolina. According to figures in the 1971 Christmas Bird Count, this species is visiting the Carolinas in winter in larger numbers than ever before.

1970 HABITAT RELATIONS STUDY OF THE NESTING BIRDS OF WILLIAM B. UMSTEAD STATE PARK

HARRY E. LeGRAND JR.

The purpose of this research was to study the habitat relations of the nesting birds in an extensive woodland environment. Breeding bird censuses were made on seven carefully selected plots representative of the major habitat types at William B. Umstead State Park. Each census was conducted by visiting the plot at least five times during the summer and directly counting the number of pairs or, more correctly, the number of singing males present.

DESCRIPTION OF STUDY AREA AND CENSUS PLOTS

William B. Umstead State Park is located about 8 miles NW of Raleigh, N. C. Most of the 5,200-acre park is either pinewoods or mixed pine-hardwoods. This is especially true in the drier and higher sections. Along the creeks there are essentially pure hardwoods, but away from the creeks there are few pure hardwood forests. Climax forests (oak-hickory) are rare. Below the dams of the three lakes are bushy areas, and there are a few bushy clearings scattered over the park. Also, a power line bisecting the park offers some nesting habitat for a few open-country birds. Along the park boundaries are a few residential and farming areas. However, Umstead State Park is mainly a solid block of second-growth woodland.

The seven plots I censused were of different-aged forests, except for two lowland hardwood censuses. The youngest stage plot was located just outside the park at the Raleigh-Durham Airport. This plot was a mixed sapling brushland, but a grassy field adjacent to the saplings was censused in connection with them. Since this sapling habitat was restricted to only a few places in the park, I chose this one because of its adequate size. There was a gap in the regular succession stages at the park. There were almost no young pine forests (10 to 30 years) in the park, since the area had been out of cultivation for about 30 to 40 years. The next census was a middle-aged pine forest with an understory of hardwoods. This type of forest was common at Umstead, but usually there were a few large hardwoods present in the canopy. The next census, a predominantly pine forest (some hardwoods in the canopy), was the most typical habitat in the park. Following this plot was one that was approximately evenly-mixed pine-hardwood. The last of the upland forest types, the oak-hickory climax, was so limited in the park that I was unable to census this type. Instead, I censused a mature hardwood ridge overlooking a creek. This forest was similar to the oak-hickory except there was less understory and fewer hickory trees present. The two lowland hardwood forests were located along Crabtree Creek. One census was of a fairly narrow hardwood forest along the creek, but the other was richer and more extensively deciduous away from the creek. Many special habitats, such as a fresh-water marsh and a wet thicket, were not censused because their distribution was very limited at the park, and they were not representative of the area.

RESULTS

The values for each species in Table 1 are the numbers of pairs per 100 acres of habitat (converted from the number of pairs per acres of plot). These values are important because they can be used as a comparison of a species' abundance in the habitats in which it nests. Values of 10 or under on the table are not very significant, since they represent only one or two pairs of birds on a particular plot. A plus sign on the table indicates that a species was recorded in a plot only on one visit. The most

TABLE I. *Distribution of the birds recorded on the breeding bird censuses, expressed in number of pairs per 100 acres of habitat.*

	Brushy Saplings	Pine Forest	Predominantly Pine Forest	Mixed Forest	Upland Hardwood Forest	Creekbank Hardwoods	Lowland Hardwoods
Eastern Meadowlark	46*/0						
Grasshopper Sparrow	46*/11						
Prairie Warbler	52						
Yellow-breasted Chat	37						
Field Sparrow	30						
Bobwhite	15	4.6	6.5			10	
Yellowthroat	15						
Indigo Bunting	15						
Rufous-sided Towhee	15	9	13				
Ruby-throated Hummingbird	7.4	2.3	6.5				20
Brown Thrasher	7.4						
Cardinal	7.4	18	19	14	13	60	40
Bachman's Sparrow	7.4						
Mourning Dove	3.7		6.5				
Eastern Kingbird	3.7						
Carolina Chickadee	3.7	14	19	18		30	10
Carolina Wren	3.7	9	13	9	13	30	20
White-eyed Vireo	3.7						
Blue Grosbeak	3.7						
Red-eyed Vireo		23	33	37	65	60	70
Pine Warbler		23	13	32			
Wood Thrush		18	39	32	39	70	60
Summer Tanager		14	13	23	13	20	20
Solitary Vireo		9					
Ovenbird		9	6.5	14			10
Yellow-shafted Flicker		4.6	6.5	4.6	13	10	10
Red-bellied Woodpecker		4.6		9	13	20	20
Hairy Woodpecker		4.6		4.6	6.5	10	10
Blue Jay		4.6	13	9	6.5		
Brown-headed Nuthatch		4.6	6.5	9			
Hooded Warbler		4.6	13		13	20	30
Scarlet Tanager		4.6	6.5	18	+	20	10
Yellow-billed Cuckoo		+	6.5			20	30
Tufted Titmouse			13	32	6.5	30	20
Common Crow			6.5				
Yellow-throated Warbler			6.5			20	10
Brown-headed Cowbird			6.5	4.6		10	30
Eastern Wood Pewee				14			
Downy Woodpecker				9	6.5	10	10
Great Crested Flycatcher				9	+	10	
Acadian Flycatcher					19	60	50
Blue-gray Gnatcatcher					6.5	30	30
Parula Warbler					6.5	10	20
Kentucky Warbler					6.5	10	20
Screech Owl						10	10
Eastern Phoebe						10	10
Yellow-throated Vireo						10	10
Louisiana Waterthrush						10	10
American Redstart						+	40
Whip-poor-will							10
Acres of plot	26.5	22.0	15.5	22	15.5	10	10
Pairs	65.0	40.5	42.0	66	38.0	61	64
Pairs/100 acres	240.5	184.0	271.0	300	245.0	610	640

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*Grassy field sector only.

important values on the table are the total numbers of pairs per 100 acres of each habitat. These numbers indicate the density of nesting birds in each habitat and tell which habitats are more attractive to breeding birds than others.

DISCUSSION

Because Umstead State Park is mostly a pine forest with a heavy growth of deciduous understory, the most common birds in the park are naturally those that live either in the pine forests or in the deciduous understory. The Pine Warbler is the abundant bird of the pines, and the Wood Thrush and Red-eyed Vireo are the dominant birds of the understory, though the vireos are also abundant in mature hardwoods. Other common birds are those nesting in pines or mixed woods or nesting in deciduous understory. Because most of the large deciduous trees are located along creeks, woodpeckers and other birds of the deciduous forest are most common there. Also, a few species nest only in lowland hardwoods, and, therefore, these woods have by far the highest concentration of birdlife in the park.

ACKNOWLEDGMENTS

This research was supported by a National Science Foundation award (Grant No. GY-7279) to the School of Forest Resources at North Carolina State University, under the direction of T. E. Maki. T. L. Quay, of the Department of Zoology, at North Carolina State University, was my advisor and helped in the preparation of this paper.

331 Yadkin Drive, Raleigh, N. C. 27609, 25 August 1971.

Conservation

. . . with Marie Mellinger

Doing One's Thing

Spring brings thoughts of the out of doors, a longing to be out and doing where "flowers are springing and birds are a-winging." Now is the time to get as close to nature as possible. What ever your favorite form of outdoor fun, spring is the time when all nature is going through a renewal that can give our lives a special lift. Back-pack along the Appalachian trail, attend spring CBC and GOS, take in the wild flower pilgrimage, or just get out and sit on a mossy log in your own woods and watch the first butterflies flitting over the first flowers of the season.

For those of you who enjoy wilderness camping, South Carolina offers some exceptional scenery and mountain hiking. Oconee State Park, 12 miles NW of Walhalla, is in the heart of the South Carolina Mountains, on the borders of the National Forest. There are hiking trails extending for miles, and you can see such springtime beauties as masses of mountain laurel and rhododendrons, and beds of blossoming trillium and violets. Table Rock State Park is 30 miles N of Greenville, and from there nature trails climb Table Rock and the Pinnacle mountains.

Good News!

In these days of ecological disasters and forwarnings of doom I thought it would be refreshing for once to record only bright spots on the environmental picture. To begin with, it seems definitely established that there is still an Ivory-billed Woodpecker alive in South Carolina. In recognition of his work to prevent lumbering in the Santee Swamp, supposed haunt of the Ivory-billed, Alex Sanders was presented with a painting of the species by the Sierra Club. This presentation followed the announcement by William Campbell, Columbia chapter president of the Audubon Society, that the Ivory-billed had recently been photographed. Location has carefully not been pinpointed to protect the birds from an invasion of bird-watchers that might disturb both the birds and their habitat.

The only known recording of the Ivory-billed Woodpecker is now available on a new record from the South Carolina Wildlife Resources Department. The record, Bird Songs of South Carolina, was produced by Peter Paul Kellogg in cooperation with Cornell University's Laboratory of Ornithology. The record may be obtained by sending $2.00 to the South Carolina Wildlife Resources Dept., Box 167, Columbia, S. C. 29202.

The Army Corps of Engineers announced that the controversial request to dredge a canal on Pawley's Island had been withdrawn.

The South Carolina State Development Board issued a report opposing the Trotter Shoals dam project on the Savannah River. In this they join an ever increasing number of conservation organizations, the Georgia Department of Game and Fish, and an unofficial position by representatives of the South Carolina Wildlife Resources Commission.

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Nathaniel P. Reed, assistant secretary of the Interior, recently states that a survey showed twice as much time spent in bird watching last year, than was spent in hunting. This same survey by the Bureau of Sport Fisheries and Wildlife states that "there are over 870,000 persons who watch birds over an average of 117 days per year." In another rather astounding statement, Fish and Wildlife Officials stated "units of wilderness within National Wildlife Refuges will be administered in such a manner as to preserve their wilderness character for the use and enjoyment of the American people, and at the same time, leave them unimpaired for future use and enjoyment."

****

I recently visited the Sea Pines Forest Preserve on Hilton Head Island, a 572-acre wilderness set aside by Charles Frazier and planned by Glen McCaskey to protect animals and birds and provide visitors with a unique experience. Trails wind through varying habitats, with ponds of waterfowl and with areas of deep woods with age-old live oaks and magnolias. A 3,400-year-old Indian shell ring is within the area, as well as dikes from the original Lawton Plantation rice fields. A permanent forest preserve set in the heart of a major development is truly remarkable, and this project should set a pattern for community planners every where.

Mr. Frazier also recently purchased some 500 acres comprising the two heronries on Hilton Head, that these may be preserved. White Ibis, Great Blue Herons, Little Blue Herons, Louisiana Herons, Common Egrets, Snowy Egrets, and Cattle Egrets nest in these rookeries. Yellow-crowned and Black-crowned Night Herons nest on the outskirts of the colonies, and one rookery is ringed by five Osprey nests. Birders and ecologists can be very thankful that these valuable breeding grounds are being preserved.

To Have and to Hold

Alaska's "pageant of wildlife," with emphasis on its abundant migratory birds, is illustrated in a 16-page color booklet just issued by the Interior Department's Fish and Wildlife Service. Titled "To Have and to Hold," the booklet points out, mostly in photographs, that this natural bounty will not be easy to preserve in a vast area now threatened by rapid change.

In his foreword, Secretary of the Interior Rogers C. B. Morton stresses that "the life cycle of tens of millions of Northern Hemisphere waterfowl, sea birds and other species are dependent upon Alaska's islands, coastal plains, river valleys and marine waters." The Secretary adds: "As the decisions to develop Alaska's oil and water resources are being made, it is essential that man also preserve the living riches of this northern land. It will be a crucial test of man's ability, ingenuity and self-restraint to do so. This is the highest aspiration of the Department of the Interior."

The pamphlet, for sale at 35 cents by the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, describes the vital role of Alaska in producing migratory birds for America and the entire Pacific Ocean basin and describes the areas that must be protected if these valuable species are to survive.

Fast Action Increases Penalties for Killing Eagles

Secretary of the Interior Rogers C. B. Morton praised Congress for taking fast action toward increasing the Federal penalties for killing Bald and Golden Eagles. The House voted favorably 7 February on the recommendation of the Merchant Marine and Fisheries Committee amendments to the Bald Eagle Protection Act of 1940 that would provide for maximum penalties of $5,000 and one year imprisonment for subsequent offenses. "After the deplorable eagle slaughters in Wyoming revealed last year, the present efforts indicate the continuing concern of the Congress for the preservation of our national bird," Secretary Morton said.

Congress became concerned with the possible extinction of the Bald Eagle as early as 1940. The Bald Eagle Protection Act of that year forbid the taking, selling, etc., of Bald Eagles or their parts unless under special permit. It provided for fines of not more than $500 and imprisonment of not more than 6 months, or both.

The Department of the Interior had recommended enactment of legislation similar to that just passed by the House of Representatives. Under Secretary Pecora advised the Committee on Merchant Marine and Fisheries in September that "increased penalties, together with a requirement of less specific criminal intent will serve to deter future violations of the Act." The Bald Eagle Protection Act was amended in 1962, extending to the Golden Eagle those protections already afforded the Bald Eagle.

Now Available:

Plans for the Duncan bluebird nest box, available from W. G. Duncan, 519 Ridgewood Road, Louisville, Kentucky 40207. Or completed nest boxes from Greenfield Wood Products, Youngs Creek, Indiana 47472, $3.00 each.

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From Public Documents Distribution Center, 5801 Tabor Avenue, Philadelphia, Pa. 19120: *Camping in the National Park System,* 25 cents, and *Back-Country Travel in the National Park System,* 35 cents.

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Conservation Yearbook, *Our Living Land*-$2.00 from U. S. Government Printing Office, Washington, D. C. 20402

Carolina Birds and Birders

. . . with Willie Morrison

What on Earth is Anting?

ELOISE F. POTTER

On 3 March 1964 I saw five Starlings anting outside our dining room window, and life in the Potter household never has been the same since. Newly named editor of *Chat,* I could think at the moment of nothing more than getting enough information to write a good field note. Subsequent correspondence with the late Rhett Chamberlain encouraged me to try to watch systematically for anting in wild birds, to collect specimens of the ants used, and to try to shed some light upon the perennial question, "Why do birds ant?" Nearly 8 years later I still do not know *why* birds ant, but I can answer plenty of questions about the who, what, where, when, and how of anting behavior.

The house in Zebulon had a glass-paned back door that could be watched easily from the kitchen and utility room. Outside this door were two mature sapsucker riddled pecan trees and the remains of an old apple orchard. Grass was scarce under the trees, and several large ant colonies could be seen with the aid of a field glass. First thing every morning and at least once every 2 hours thereafter until dark I stood at the back door and watched for anting. If I saw any Starlings or Blue Jays within the orchard plot as I went about my housework, I would watch until they left the yard because I had previously noted that birds of these species are prone to ant. During the 29 months of regular watching, I recorded 15 episodes of anting involving 25 birds of 6 species. In September 1966 we moved into our new house on a wooded lot in the country 3.5 air miles from Zebulon. During the next two years, without especially watching for anting, I saw 10 additional episodes involving 20 birds of 6 species. Eventually these 25 observations formed the basis for a 22-page paper that appeared in the October 1970 issue of *Auk,* the journal of the American Ornithologists' Union, as "Anting in Wild Birds, Its Frequency and Probable Purpose." And now for the questions:

Is anting uncommon behavior for wild birds?

No, it is just seldom seen and reported.

How do birds act when they ant?

Birds may ant either actively or passively, combine the two forms, or alternately ant and engage in some other activity such as feeding or preening. While anting the bird may perch on the ground, on a relatively small plant, or on any part of a tree all the way from the main trunk to the terminal branches. I have seen a bird move back and forth from a tree to the ground several times, anting a few times between each movement. It has surprised me to see how variable anting behavior can be.

In active anting the bird picks up ants with the bill and inserts them among the feathers with stereotyped motions. In the classic anting posture one wing is lifted slightly from the body and rotated until the tips of the primaries touch the ground at right angles, and simultaneously the tail is twisted to the side of the body and brought forward until it touches, or very nearly touches, the wing. The bird then uses the ants to anoint the feathers, more often than not those of the wing. (For color photographs of birds anting see National Geographic Society's *Song and Garden Birds of North America*, pages 192-193.) The bird may crush the ants or hold them in a position so they can spray their acid excretions on the feathers.

In passive anting the bird flattens its body against the ground either at mounds or in the path of a moving column and allows the ants to crawl among the feathers. Then the bird removes the ants with the same motions used in active anting. There is usually no way to tell whether the bird is anting or sunbathing until it begins to remove the ants.

PLEASE NOTE: Sometimes preening birds will raise and rotate a wing in a manner similar to the anting posture, but the tail is not brought forward and ants are not picked up. Sometimes anting birds do not bring the tail forward, but the jerky movements of picking up and inserting the ants in the plumage distinguish this behavior from ordinary preening.

What species of birds are most likely to ant?

Over 200 species of small land birds have been seen anting in various parts of the world either in the wild or in captivity. From North and South Carolina there are more anting records for Starlings and Robins than any other species, with Blue Jays running a poor third.

Other birds known to have anted in the Carolinas include Brown Thrasher, Catbird, Cardinal, Rufous-sided Towhee, House Sparrow, Slate-colored Junco, Yellow-shafted Flicker, and Prothonotary Warbler. Doris Hauser of Fayetteville has seen both squirrels and birds anting.

Where am I most likely to see birds anting?

While birds do ant in the woods, most of the published accounts give the locations as driveways, sidewalks, lawns, and meadows. These are mostly open urban or suburban sites where birds are easily seen without being disturbed by the approaching birder. The alert housewife who cooks, washes dishes, folds laundry, or sews beside a window is far more likely to see anting in wild birds than is the person conducting active field studies.

Once I spotted a Blue Jay anting while I was driving down one of Zebulon's busiest streets. Fortunately I managed to circle the block and confirm the sighting without causing an auto accident, but I do not recommend this as a method of bird study.

When am I most likely to see birds anting?

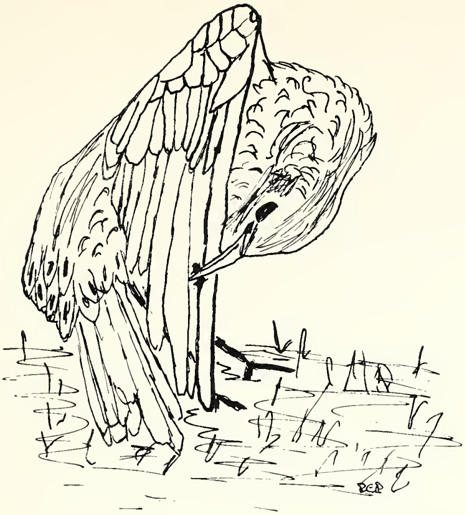
Birds may ant from early March to late November, but the great majority of records for temperate North America fall between mid-May and the end of the first week in October. Apparently few adults ant before young of the first brood are ready, or very nearly ready, to leave the nest. At Zebulon more individual birds of more different species anted in August than in any other month of the year. More birds anted in the early morning hours (before 10:00) than in late afternoon or at midday.

Does weather influence anting activity?

I think so, but more evidence is needed to confirm my findings. So far at Zebulon there is an excellent correlation between precipitation and anting. Of my 25 anting episodes, 19 took place within 72 hours after rainfall. The most intensive anting took place within 48 hours after rainfall during and following prolonged wet spells in August, such as those associated with the passing of tropical storms. Autumn mornings when fog doesn't clear until mid-morning are also good times to look for anting.

How old are birds when they ant?

In her classic study of the Song Sparrow, Margaret M. Nice found that hand-reared birds began anting at 36 and 37 days of age. My own records show more anting by juveniles than by adults, but this is probably because juvenile birds outnumber adults during the peak of the anting season. I have noted that juvenile Robins appear to be particularly prone to ant if they become wet while molting into first winter plumage.



Why do birds ant?

To the best of my knowledge no one can give a positive answer to this question. Two popular theories are that birds ant 1) to rid themselves of ectoparasites, or 2) for the pleasure of self-stimulation. While each of these statements might logically explain certain cases of anting, I do not think that either one covers all the data now available on anting behavior.

The second thesis seems quite likely to be true when one considers the large number of birds that use strange objects like moth balls, lighted cigarettes, and walnut hulls for dressing their feathers while assuming anting postures. Could anting be the avian version of drug addiction? Not very likely. Those who study the development of animal behavior say that a widespread and stereotyped pattern like anting must have had a functional origin. These researchers tend to believe that anting helps birds reduce or prevent ectoparasite infestations.

While I was studying anting at Zebulon, Elizabeth Teulings was gathering data on bird parasites at Chapel Hill, N. C. When we compared notes, I was astounded to learn that parasite infestation is low during the same summer months when anting is at its peak (July, August, September.) Months of major anting activity coincide with the postnuptial and postjuvenile molts for most of the species I studied. The one Slate-colored Junco anting record falls within the early March period for the prenupital head molt of that species, and this is the only bird I have seen scratching its head during an anting episode. Putting these facts together, I concluded there must be some significant relationship between anting and molting. Perhaps birds ant to soothe skin irritated by new feather growth or to help remove the waxy substance that coats the skin during molts. There may be some other reason such as hardening the newly emerged feathers or softening the sheaths from which the feathers emerge. More observations of wild birds and controlled experiments with captive birds will be needed to provide an adequate explanation for the apparent correlation between anting and molting.

What should CBC members do if they see a bird anting?

Many published accounts of anting are imcomplete, lacking even such fundamental data as the day of the year. Detailed reports are badly needed. If you see a bird anting, please fill in as much as you can of the outline below and send the information to me for publication in *Chat*.

Date anting took place:
Time of day:
Locality:
Species of bird:
Age of bird:
Sex of bird:
Form of anting (active or passive):
Feathers treated and number of treatments:
Related behavior:
Condition of plumage (evidence of parasite infestation or molting, if any):
Weather conditions at time of anting:
Number of days since last local rainfall:
General weather conditions for last several days:
Comments:
Observer:
Mailing address:

The reason for most of the data requested will be obvious to those of you who have read this article. The topic of related behavior probably deserves further explanation. When a bird ants, it may be in a state of ecstasy and appear to be completely unaware of its surroundings. On the other hand it may ant and feed alternately in a very casual manner, drive away other birds that want to visit the ant hills, or dust and sunbathe in conjunction with anting.

Sometimes the related behavior may be even more interesting to the observer than the anting itself. At 6:03 AM on 29 August 1967 two molting juvenile Robins anted beside the driveway of our home near Zebulon. The first made only a few treatments, but the second anted steadily until 6:15. This bird on several occasions picked up in its beak a twig of white oak having 13 small to medium-sized leaves still attached and swept the ground with it by turning the head 180 degrees, apparently in a successful attempt to locate more ants in the leaf litter. The bird picked up the same twig too many times for the action to have been merely an accident. I had read about birds in far away places using twigs to obtain food, but seeing a Robin using a tool in my own yard was undoubtedly the most exciting birding experience of my life.

The study of anting is much like putting together a jig-saw puzzle. The ornithologist must fit into place many small bits of information before he can see the big picture. To gather data as quickly as possible the scientist studies birds in captivity, exposing them to ants under controlled conditions. This is no doubt useful, but there is still a need for abundant data on anting by wild birds that must compete for nesting sites, mate, rear young, find food, survive storms, watch for predators, and even migrate. Such a body of knowledge can come only from patient watching and careful note taking by dozens--perhaps even hundreds--of amateur bird students. The persistent watcher may even be rewarded by a glimpse of tool use by some exceptional Robin or Starling. It won't be as much fun as a trip to the Galapagos to see Darwin's Woodpecker Finch in action, but it will be less expensive and will help answer the question, "Why do birds ant?"

ACKNOWLEDGMENTS

Gladys Baker and Willie Morrison read the manuscript and made suggestions for which I am grateful. The drawing of a bird anting is by my daughter, Patty Potter, who has been a CBC member all of her 13 years.

P. O. Box 277, Zebulon, N. C. 27597, 19 January 1972.

BIRD WATCHERS' Roundtable

CBC Fall Meeting on Outer Banks

The 1971 fall meeting of the Carolina Bird Club was held on the North Carolina Outer Banks the weekend of 24-26 September. Headquarters for the meeting was the Carolinian Motor Hotel in Nags Head. Approximately 150 people registered, and among them were 25 members of the Cape Henry Bird Club at Norfolk, Virginia. On Friday night James F. Parnell, from the University of North Carolina at Wilmington and the General Field Notes editor for *The Chat,* gave a slide program orienting the birders with the Outer Banks and some of the birds characteristic of the region.

Saturday field trips were led by several CBC members familiar with the area to the Bodie Island lighthouse pond and vicinity and to the Pea Island National Wildlife Refuge, particularly to North Pond, a large impoundment 3 miles S of Oregon Inlet. Some birders went on their own to the Cape Hatteras area. Saturday was a clear and rather windy day, but it was obvious even by early morning that a heavy passerine migration was in progress. Warblers were calling overhead everywhere. The most common was the Palm Warbler, but Cape Mays and American Redstarts were also quite numerous. Most of the birders seemed to concentrate at North Pond, where Jim Parnell found and photographed a Reddish Egret, the second record for the state. This bird was well observed by a large number of people. Also in the immediate area were six or seven Buff-breasted Sandpipers feeding on a dry flats area just north of the pond. Another highlight of the day was a pair of Hudsonian Godwits seen at the south end of the pond. Two other exciting finds on Saturday were an Oregon Junco seen by Robert Ake at Avon and 2 Black Rails seen crossing a muddy channel in a marsh at Bodie Island by Lou Overman and Kitty Kosh.

By the time the Saturday evening program came around, most of the birders had finished and unusually successful day of field work, and nearly everyone had added one or more lifers to their lists. The slide program for the night was a study of Osprey nesting populations in the Chesapeake Bay area by Mitchell A. Byrd of the College of William and Mary, Williamsburg, Va. (In my opinion Dr. Byrd's program was one of the best ever presented at a CBC meeting.) Following the slide program was the eagerly awaited species countdown. A remarkable total of 165 species were reported seen on the coast from Kitty Hawk to Hatteras, and seven more species were seen on Sunday for a grand total of 172. In addition to the rarities mentioned above were: nine species of hawks, including several Peregrine Falcons and Pigeon Hawks; 29 species of shorebirds, including 100+ Piping Plovers and at least 15 Long-billed Dowitchers and 30 Stilt Sandpipers; a

Western Kingbird; a Philadelphia Vireo; 22 species of warblers, including Nashville, Black-throated Green, Blackburnian, and Wilson's; dozens of Baltimore Orioles; and one or two Lark Sparrows.

This CBC meeting was certainly one of the best ever held. The fellowship was warm, the programs were informative, and the birding at a CBC gathering has never been more exciting. Robert J. Hader, who made the arrangements for this meeting, did an excellent job, and CBC President Pat Probst handled the business session with commendable efficiency. It is hoped that the CBC can meet at Nags Head again in the near future.–HARRY E. LeGRAND JR.

Auklets

During 1971 several CBC members published papers and notes in *Auk,* the quarterly journal of the American Ornithologists' Union. The editor is Oliver L. Austin, who wrote *Birds of the World* (1961), beautifully illustrated by Arthur Singer, and edited the three-volume 1968 finch addition to Bent's *Life Histories.*

"A Field Study of the Wrenthrush, *Zeledonia coronata"* (*Auk,* 88:1-20) is by James H. Hunt of Raleigh. Jim did the field work in Central America while he was in graduate school at Louisiana State University. He is now working toward a doctorate at the University of California.

"Audubon's Warbler in North Carolina" is the title of Betty Davis' note in the October 1971 issue of *Auk* (88:924). Betty trapped the bird in her yard at Rocky Mount, N. C., on 28 February 1970. Roxie Collie Laybourne identified the specimen as an immature male of the Pacific coast race. This appears to be only the second authentic record of *Dendroica auduboni auduboni* for eastern North America.

On the same page with Betty's note is an article by Maurice Broun, the Hawk Mountain man, about seeing House Sparrows feeding at night on moths and other insects attracted by floodlights at an airport in Bangkok, Thailand. Fred L. Johns (*Chat,* 29:114) made the same discovery in Raleigh's Cameron Village. Jack and Eloise Potter have seen Killdeer feeding around lights in the parking lot at K-Mart on Six Forks Road in Raleigh. Do you readers know any other examples of this type of behavior?

"Wood Ducks nesting in chimneys" is the title of Paul A. Stewart's recent note in *Auk* (88:425). Dr. Stewart, who lives at Oxford, N. C., and is associated with the Agricultural Experiment Station, wrote his Ph.D. thesis on the Wood Duck and continues to be interested in the species' behavior and management. He is making final revisions on a paper scheduled for publication in *Chat* this year, "The Plight of Wood Ducks in the Carolinas."–EFP

A Carolinian in Zambia

Dale Lewis, whose "Summer Birds at a Coastal Marsh Impoundment in North Carolina" appeared in *Chat* in December 1970, recently arrived at Lochinvar Ranch in Zambia, Africa, to spend a year doing research for the Zoology Department of the University of Michigan under grants from the University and National Geographic Society. Dale's work will deal primarily with ornithology. The 100-square-mile ranch is part of Kafue Flats, one of the richest game reserves in Africa. The Raleigh native's present address is Box 12, Lochinvar Ranch, Monze, Zambia, Africa.

That's Our Doug Pratt!

Watch for announcements of the forthcoming publication of *The Mammals of Louisiana* by George H. Lowery Jr. CBC's own Doug Pratt is currently preparing about a dozen paintings for color plates plus skull drawings and pen-and-ink sketches to illustrate the book. Club members who have watched Doug's rapid growth as both artist and naturalist are pleased that the excellence of his work is recognized by Dr. Lowery, who is one of the country's foremost zoologists.

Confusing Winter Oriole

The Raven (41:55) recently published a note pointing out once again that no matter how carefully we study a bird in the field or even in the hand, some circumstances require a critical comparision with study skins:

"A bird fulfilling all the field marks of a female Bullock's Oriole–include a white belly–appeared at a feeding station near Fairfax, Virginia, in late December 1969. Gale Monson saw the bird on 12 February 1970, and on 13 February it was trapped and turned over to J. M. Abbott for treatment of a frozen foot. Several weeks later the bird died and was given to the U. S. National Museum. A critical review of the specimen, particularly by Mrs. Roxie Laybourne, revealed that it was, in fact, a Baltimore Oriole. This strongly suggests that sight records of female or immature Bullock's Orioles in the East are all suspect."

Bank Swallows in July at Kerr Lake

The September 1970 *Raven* also reports that Gilbert Grant and Carl Johnson found Bank Swallows at Kerr Reservoir near Clarksville, Virginia, in early July 1969. Because there are no known breeding sites in the vicinity, these birds must be assumed to be early fall migrants. However, recently established Cliff Swallow colonies at Kerr Lake and other major reservoirs in the Carolinas suggest the possibility that Bank Swallows might follow suit.

BOOK REVIEW

HIGH ARCTIC. George Miksch Sutton. Paul S. Eriksson, Inc., 119 W. 57 Street, New York, N. Y. 10019, 1971. 105 p. Illus. Index. $12.95.

Subtitled "An Expendition to the Unspoiled North," this book is a charming memoir by the man who is currently Professor Emeritus of Zoology at the University of Oklahoma and Curator of Birds at its Stovall Museum. At an age when many men contentedly play miniature golf in retirement villages, Dr. Sutton joined a field expedition to Bathurst Island, halfway between the Arctic Circle and the northernmost lands known to man. Young in mind and spirit, Dr. Sutton gamely bounced around the Far North in a toboggan pulled by a Ski-Doo and in an Otter airplane, making field sketches under miserable weather conditions. Each time he encounters a scene of great beauty, a new species of wildlife, or a new awareness of his own humanity, he expresses himself with prose as beautiful as his paintings. I suppose the purpose of the book is to show how zoologists study the birds and mammals of the Arctic, but I am most impressed by what it reveals about George Miksch Sutton, artist, writer, teacher, and thoroughly remarkable human being.--EFP

CHRISTMAS BIRD COUNT 1971	Individual Totals	COAST							COASTAL PLAIN							PIEDMONT											MTN.		
		Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 26 December	Wilmington, N.C. 18 December	Southport, N.C. 19 December	Litchfield-Pawley's Is., S.C. 29 December	Charleston, S.C. 2 January	Hilton Head Island, S.C. 29 December	Beaufort Co., N.C. 2 January	Pamlico Co., N.C. 26 December	Rocky Mount, N.C. 1 January	Southern Pines, N.C. 23 December	Dillon, S.C. 28 December	Columbia, S.C. 27 December	Aiken, S.C. 26 December	Roanoke Rapids, N.C. 31 December	Henderson, N.C. 30 December	Raleigh, N.C. 1 January	Chapel Hill, N.C. 2 January	Greensboro, N.C. 1 January	Winston-Salem, N.C. 2 January	Stanly Co., N.C. 1 January	Charlotte, N.C. 31 December	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 30 December	Yancey-McDowell Co., N.C. 18 December	Buncombe Co., N.C. 31 December	Great Smoky Mtn. Natl. Park, 28 December
Common Loon	296	99	29	60	16	56	18	11	3	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—
Red-th. Loon	726	101	2	42	552	5	—	23	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Red-necked Grebe	4	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Horned Grebe	554	127	79	17	87	15	93	74	26	5	2	1	—	—	—	12	1	1	—	3	—	10	—	—	—	—	1	—	—
Pied-billed Grebe	434	111	14	42	27	19	18	27	12	9	3	20	2	2	7	30	1	31	4	19	7	3	4	1	—	—	13	7	1
Brown Pelican	249	*	4	5	40	22	75	103	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gannet	1023	419	14	172	331	87	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Cormorant	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
D. -cr. Cormorant	4622	638	3,000	50	529	162	85	144	3	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anhinga	11	—	—	2	1	1	3	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Blue Heron	324	27	73	65	18	5	53	39	4	6	1	3	1	3	1	6	1	4	1	3	4	3	3	—	—	—	—	—	—
Green Heron	7	—	1	1	—	—	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Little Blue Heron	92	16	6	3	10	5	25	27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cattle Egret	2	—	—	—	—	—	—	*	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Egret	268	24	17	56	8	9	59	94	—	—	—	—	—	—	*	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Snowy Egret	159	42	6	13	4	4	38	52	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Louisiana Heron	151	16	8	27	13	10	63	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-cr. Night H.	146	92	17	2	30	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow-cr. Night H.	4	2	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Bittern	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Bittern	22	19	*	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glossy Ibis	23	3	*	19	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White Ibis	353	—	3	—	337	*	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whistling Swan	502	435	—	1	—	—	25	—	39	*	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Canada Goose	3830	2,500	*	78	—	42	17	1	2	—	2	—	—	—	—	598	—	—	2	2	358	—	17	211	—	—	—	—	—
Brant	154	154	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Snow Goose	2100	2,100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blue Goose	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ross' Goose	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mallard	1168	123	*	54	21	62	8	9	250	—	1	21	*	—	—	46	—	65	14	63	307	53	1	21	—	—	23	26	—
Black Duck	1438	1,200	12	24	18	1	50	22	10	—	2	15	—	—	—	14	—	—	—	7	34	20	—	8	—	—	1	—	—
Gadwall	439	284	2	18	1	17	66	8	—	—	—	6	—	—	—	—	—	4	—	9	2	—	21	—	—	—	1	—	—
Pintail	3150	3,000	*	116	9	*	20	4	—	—	—	—	—	—	—	*	—	—	—	1	—	—	—	—	—	—	—	—	—
Common Teal	*	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Green-winged Teal——5806	5,600	8	36	30	—	43	6	—	—	—	1	—	—	—	2	—	55	—	1	—	4	20	—	—	—	—	—	—
Blue-winged Teal——— 138	5	15	59	18	—	40	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Widgeon——1298	444	8	152	44	250	267	10	—	—	—	5	—	—	—	3	—	54	—	7	4	—	47	3	—	—	—	—	—
Shoveler————— 753	450	*	1	—	*	300	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—
Wood Duck———— 350	—	1	153	—	*	18	85	26	—	7	1	4	2	—	12	—	2	4	2	1	12	3	—	—	—	—	17	—
Redhead ————1605	1,600	3	—	—	1	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	1	—	—
Ring-necked Duck ——1111	345	*	25	1	6	70	23	25	—	4	112	—	2	—	13	—	314	—	1	6	4	67	—	—	—	18	75	—
Canvasback ———— 443	136	12	7	19	100	150	—	10	—	—	—	—	—	—	—	—	*	1	—	1	6	—	—	—	—	1	—	—
Greater Scaup ——— 149	43	*	—	—	60	—	43	3	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—
Lesser Scaup ————1164	40	*	19	21	5	—	988	5	—	—	—	—	1	—	17	—	29	1	20	8	—	4	—	—	—	6	—	—
Scaup (sp.?) ———— 176	—	25	—	—	—	151	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Com. Goldeneye ——— 43	5	3	1	13	*	13	2	—	—	—	—	—	—	—	*	—	—	—	4	—	—	—	—	—	—	2	—	—
Bufflehead ———— 731	223	41	66	53	25	188	65	3	—	—	2	—	—	—	*	—	20	—	11	—	—	10	—	—	—	24	—	—
Oldsquaw ————— 33	11	—	—	—	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White-wing Scoter ——— 18	9	—	3	—	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Surf Scoter ———— 352	172	1	6	—	15	—	—	1	157	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Scoter ———1121	473	*	500	8	118	5	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scoter (sp.?) ————8000	7,500	—	500	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ruddy Duck ————1052	387	210	12	15	29	200	7	17	—	—	2	1	—	—	—	—	151	3	—	1	—	—	—	—	—	17	—	—
Hooded Merganser—— 425	84	6	18	38	1	70	72	—	—	1	48	*	—	—	13	—	53	—	21	*	—	—	—	—	—	—	—	—
Com. Merganser ——— 44	31	—	—	—	—	—	10	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Red-br. Merganser ——1663	535	335	488	110	43	79	57	—	15	—	—	—	—	—	*	—	1	—	—	—	—	—	—	—	—	—	—	—
Turkey Vulture ——— 179	—	*	10	13	*	21	42	3	*	6	3	1	3	16	17	14	2	6	1	*	7	3	1	—	—	2	3	5
Black Vulture ——— 212	—	*	6	11	*	15	45	—	—	1	—	—	7	10	114	—	—	—	—	—	3	—	—	—	—	—	—	—
Sharp-shinned H.——— 35	9	*	3	4	*	3	3	—	—	1	*	—	—	—	1	—	2	—	1	—	2	—	—	—	—	4	2	—
Cooper's Hawk ———— 19	1	—	1	—	—	3	1	—	2	—	—	—	1	1	1	—	1	—	—	1	3	1	1	—	—	—	1	—
Red-tailed Hawk ——— 150	2	2	13	4	*	17	8	4	2	3	7	3	10	2	5	3	16	3	9	1	6	15	3	—	—	1	11	—
Red-shouldered H.——— 48	1	1	2	3	*	9	6	1	2	1	—	1	6	2	1	—	*	6	1	*	3	1	—	—	—	—	1	—
Broad-winged H. ————1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Golden Eagle —————1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bald Eagle —————2	—	*	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Marsh Hawk ———— 123	38	3	15	11	1	19	13	1	5	1	2	1	1	*	2	—	—	—	—	—	5	4	1	—	—	—	—	—
Osprey ——————7	—	—	—	—	1	—	4	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Peregrine Falcon ————3	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pigeon Hawk —————7	6	*	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sparrow Hawk ——— 432	25	57	38	27	14	15	82	41	19	10	6	6	8	15	7	—	22	3	2	11	11	4	1	—	—	1	6	1
Ruffed Grouse —————2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Bobwhite ————— 585	38	14	37	18	*	23	44	19	—	7	14	*	4	3	16	—	43	75	31	19	105	21	34	—	2	15	1	2
Ring-nk. Pheasant ——— 45	45	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Turkey ———————3	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	1
King Rail ——————— 30	5	*	1	2	—	—	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Clapper Rail ———— 412	9	4	23	46	8	273	48	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Virginia Rail —————5	2	—	1	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sora ————————— 11	1	*	4	2	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Gallinule——— 58	2	*	11	4	9	15	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Coot ————4363	1,600	332	229	79	140	1,151	10	235	—	9	18	5	22	4	—	—	410	—	33	45	17	6	—	—	—	18	—	—
Am. Oystercatcher——1019	—	60	174	60	26	667	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Semip. Plover———— 216	5	21	56	11	12	62	49	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Piping Plover ———— 126	24	70	4	8	12	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

CHRISTMAS BIRD COUNT 1971		COAST							COASTAL PLAIN							PIEDMONT											MTN.		
	Individual Totals	Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 26 December	Wilmington, N.C. 18 December	Southport, N.C. 19 December	Litchfield-Pawley's Is., S.C. 29 December	Charleston, S.C. 2 January	Hilton Head Island, S.C. 29 December	Beaufort Co., N.C. 2 January	Pamlico Co., N.C. 26 December	Rocky Mount, N.C. 1 January	Southern Pines, N.C. 23 December	Dillon, S.C. 28 December	Columbia, S.C. 27 December	Aiken, S.C. 26 December	Roanoke Rapids, N.C. 31 December	Henderson, N.C. 30 December	Raleigh, N.C. 1 January	Chapel Hill, N.C. 2 January	Greensboro, N.C. 1 January	Winston-Salem, N.C. 2 January	Stanly Co., N.C. 1 January	Charlotte, N.C. 31 December	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 30 December	Yancey-McDowell Co., N.C. 18 December	Buncombe Co., N.C. 31 December	Great Smoky Mtn. Natl. Park, 28 December
Killdeer	546	7	30	67	11	—	5	49	30	6	5	10	—	22	2	65	—	43	11	68	1	45	44	—	—	—	2	16	7
Bl.-bellied Plover	898	432	70	97	95	34	37	133	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ruddy Turnstone	190	4	32	15	34	7	33	65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Am. Woodcock	43	1	1	4	1	—	—	1	3	—	—	5	1	—	2	4	—	4	13	—	*	—	1	—	—	—	2	—	—
Common Snipe	221	20	1	14	25	3	26	2	13	—	3	6	2	—	—	66	—	4	—	1	21	6	2	1	—	—	2	3	—
Whimbrel	5	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spotted Sandpiper	16	—	*	2	—	—	—	9	—	—	—	1	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—
Willet	317	4	1	108	25	26	56	97	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Greater Yellowlegs	47	8	15	14	2	*	2	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lesser Yellowlegs	22	6	—	1	3	—	10	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Knot	36	6	*	—	27	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Purple Sandpiper	4	—	—	3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Sandpiper	16	2	*	—	1	1	—	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dunlin	8099	3,600	2,008	811	715	19	253	693	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Short-billed Dow.	505	—	229	133	133	—	—	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Long-billed Dow.	41	41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dowitcher (sp. ?)	605	32	—	—	—	13	560	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Semip. Sandpiper	388	116	70	166	14	—	—	22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Western Sandpiper	233	10	4	3	2	20	100	94	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Marbled Godwit	571	—	3	19	114	—	435	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sanderling	4964	4,500	75	57	25	13	11	283	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Avocet	67	67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pomarine Jaeger	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parasitic Jaeger	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gr. Bl.-backed Gull	1354	1,233	70	29	7	1	—	2	9	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Herring Gull	10,548	1,800	5,950	1,568	570	45	240	330	18	1	—	—	—	8	—	6	—	—	—	—	—	12	—	—	—	—	—	—	—
Ring-billed Gull	8471	1,650	2,417	1,532	330	33	290	757	52	293	—	2	—	71	—	917	22	1	—	7	*	96	1	—	—	—	—	—	—
Laughing Gull	146	17	20	51	11	—	1	46	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bonaparte's Gull	215	5	3	179	9	4	2	13	—	—	—	*	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—
Little Gull	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bl.-legged Kittiwake	33	31	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forster's Tern	1129	743	3	261	50	4	3	63	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Tern	46	9	—	2	—	1	11	23	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Tern	3	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Royal Tern	161	53	41	34	17	2	2	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sandwich Tern	3	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Caspian Tern	37	—	*	7	9	3	1	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black Skimmer	888	—	70	216	2	187	18	395	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rock Dove	1262	3	290	44	—	6	—	—	53	9	32	4	*	—	3	22	10	169	50	118	205	45	57	39	4	11	4	84	—
Mourning Dove	4311	87	36	432	20	3	95	424	137	38	54	412	47	154	14	68	48	339	196	150	668	119	230	49	7	34	166	173	111
Ground Dove	58	—	—	4	21	17	1	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Barn Owl	7	2	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	*	2	1	—	—	—	—	—
Screech Owl	22	4	1	1	2	—	1	—	—	1	—	1	—	—	1	1	—	3	1	—	*	1	—	—	*	1	—	1	2
Great Horned Owl	27	2	1	2	—	1	6	*	—	*	1	2	—	—	1	3	—	2	2	—	3	—	—	—	1	—	—	—	—
Barred Owl	17	—	1	1	—	—	2	3	*	—	2	1	—	—	1	1	—	1	2	—	—	1	1	—	—	—	—	—	—
Long-eared Owl	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—
Short-eared Owl	1	—	*	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Saw-whet Owl	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Whip-poor-will	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Belted Kingfisher	309	26	9	31	5	16	47	57	10	5	1	6	4	7	2	3	2	10	5	10	6	9	5	2	1	—	12	11	7
Yellow-sh. Flicker	1455	166	43	111	62	6	165	211	59	23	11	49	19	60	39	76	24	84	71	51	43	28	19	9	1	7	4	5	9
Pileated Woodp.	170	—	*	4	5	4	39	52	6	*	1	2	*	2	3	15	—	1	5	1	2	4	1	2	1	—	5	5	10
Red-bellied Woodp.	662	11	10	35	14	5	57	70	23	2	3	38	9	24	10	11	7	66	61	55	71	24	33	7	1	5	7	1	2
Red-headed Woodp.	117	—	1	7	—	2	9	12	11	1	2	3	—	7	8	3	2	6	6	18	5	8	1	—	*	1	—	—	4
Yel.-bell. Sapsucker	332	4	3	20	7	2	27	28	9	1	2	24	2	17	16	16	10	22	28	10	19	5	12	8	—	2	10	9	19
Hairy Woodpecker	134	—	2	5	6	—	5	6	5	1	—	8	*	3	1	4	—	12	21	5	16	9	5	5	—	2	6	2	5
Downy Woodpecker	530	11	9	11	12	4	13	17	27	5	5	21	3	8	14	15	3	41	56	47	44	22	21	13	1	6	25	46	30
Red-cock. Woodp.	50	—	2	6	3	*	10	—	3	—	—	22	*	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern Kingbird	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern Phoebe	147	3	7	8	3	2	14	26	5	2	—	2	2	7	3	3	—	4	4	—	2	6	4	2	—	1	13	15	9
Eastern Wood Pewee	*	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Horned Lark	249	1	—	—	—	—	—	—	—	—	17	8	—	—	—	9	—	—	34	—	14	155	11	—	—	—	—	—	—
Tree Swallow	323	—	*	248	4	—	—	45	21	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Barn Swallow	3	—	—	—	—	—	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blue Jay	2132	1	14	74	69	5	156	136	84	10	13	79	17	52	47	38	36	189	176	222	117	121	200	33	1	67	30	84	61
Common Raven	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	—	7
Common Crow	3627	33	108	66	36	14	257	1,367	6	4	12	25	—	50	56	9	19	150	88	139	76	180	86	79	26	10	197	377	157
Fish Crow	793	12	140	384	19	102	67	63	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bl.-cap. Chickadee	51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51
Carolina Chickadee	2353	18	29	54	28	13	111	177	28	7	14	46	8	39	68	32	18	140	116	149	131	238	116	28	5	29	225	256	230
Tufted Titmouse	1288	—	13	22	12	9	52	32	51	11	19	35	2	6	32	9	5	77	75	106	89	80	92	12	2	23	85	229	108
White-br. Nuthatch	293	—	—	—	—	—	—	—	31	—	4	15	*	—	9	8	1	4	26	41	22	29	1	4	*	5	21	49	23
Red-br. Nuthatch	46	2	—	—	—	—	—	—	—	—	—	7	2	—	—	1	*	12	3	1	3	2	1	—	—	—	6	4	2
Brown-hd. Nuthatch	666	11	20	18	23	7	189	3	14	—	2	110	1	3	39	2	10	47	39	33	16	34	41	4	—	—	—	—	—
Brown Creeper	135	3	3	2	3	*	5	1	1	1	3	9	2	—	4	9	1	18	17	7	14	4	5	1	—	—	3	5	14
House Wren	77	10	1	12	25	1	15	2	1	*	—	1	—	—	1	1	—	4	3	—	—	—	—	—	—	—	—	—	—
Winter Wren	108	11	4	7	6	1	6	2	—	—	1	10	—	—	—	9	—	11	12	2	1	1	1	4	2	1	3	5	8
Carolina Wren	1090	60	14	41	26	5	39	104	39	6	6	31	6	27	18	23	10	123	126	50	49	58	51	16	17	8	32	64	41
Long-bill. Marsh W.	40	13	5	10	9	—	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Short-bill. Marsh W.	46	21	*	3	9	—	3	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mockingbird	1421	44	45	60	60	6	36	107	40	11	9	45	15	28	24	8	27	145	66	144	138	141	101	13	2	18	16	44	28
Catbird	160	82	8	8	17	9	12	14	2	—	1	—	—	—	3	—	—	—	—	—	—	2	—	—	—	—	—	—	2
Brown Thrasher	276	16	6	21	23	3	36	18	3	—	5	10	5	3	14	9	4	28	19	5	3	19	12	1	—	1	3	9	*

CHRISTMAS BIRD COUNT 1971		COAST							COASTAL PLAIN							PIEDMONT											MTN.		
	Individual Totals	Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 26 December	Wilmington, N.C. 18 December	Southport, N.C. 19 December	Litchfield-Pawley's Is., S.C. 29 December	Charleston, S.C. 2 January	Hilton Head Island, S.C. 29 December	Beaufort Co., N.C. 2 January	Pamlico Co., N.C. 26 December	Rocky Mount, N.C. 1 January	Southern Pines, N.C. 23 December	Dillon, S.C. 28 December	Columbia, S.C. 27 December	Aiken, S.C. 26 December	Roanoke Rapids, N.C. 31 December	Henderson, N.C. 30 December	Raleigh, N.C. 1 January	Chapel Hill, N.C. 2 January	Greensboro, N.C. 1 January	Winston-Salem, N.C. 2 January	Stanly Co., N.C. 1 January	Charlotte, N.C. 31 December	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 30 December	Yancey-McDowell Co., N.C. 18 December	Buncombe Co., N.C. 31 December	Great Smoky Mtn. Natl. Park, 28 December
Robin	8159	191	210	440	451	72	207	378	59	2	28	567	9	23	60	2	—	5	8	5	6	3	8	6	1	—	18	396	5004
Wood Thrush	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hermit Thrush	134	3	2	10	17	1	21	2	1	—	1	18	1	5	7	2	—	8	7	3	—	2	1	5	2	—	2	—	13
Swainson's Thrush	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern Bluebird	788	—	1	2	7	6	48	51	29	2	3	50	—	12	18	14	4	64	90	39	25	70	41	17	—	3	67	97	28
Bl.-gr. Gnatcatcher	55	—	—	4	2	—	7	42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Golden-cr. Kinglet	1312	2	50	72	21	1	85	1	11	3	2	251	8	4	82	13	2	202	139	29	19	20	21	3	—	—	91	72	108
Ruby-cr. Kinglet	962	8	19	61	34	5	176	35	17	2	13	93	7	24	130	14	5	90	52	7	17	54	34	3	—	2	35	2	23
Water Pipit	513	—	*	—	2	—	200	*	—	—	—	—	—	25	—	50	—	136	100	—	*	—	—	—	—	—	—	—	—
Cedar Waxwing	1124	44	—	86	—	—	*	91	—	—	74	101	*	17	10	10	—	105	103	21	138	10	116	20	—	—	56	13	109
Loggerhead Shrike	226	—	2	1	8	5	5	36	5	—	11	11	4	6	9	1	14	30	3	9	15	22	17	2	—	1	—	1	8
Starling	820,996	158	449	965	118	115	14	95	176	124	300	290	49	182	489	180	1273	742	823	334,484	783	744	475,000	267	305	614	329	1,614	314
White-eyed Vireo	11	—	—	—	—	1	7	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Solitary Vireo	17	—	1	6	3	—	7	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-and-white W.	5	—	—	—	1	—	1	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Orange-crowned W.	7	2	—	2	3	—	—	*	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—
Myrtle Warbler	12,723	6,164	935	1,309	1,281	210	1,101	1,067	178	28	4	33	59	4	41	49	7	26	98	9	45	16	34	6	—	1	8	4	6
Yellow-throated W.	9	—	—	2	—	—	3	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blackpoll Warbler	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pine Warbler	220	3	2	2	6	1	64	42	2	—	3	25	1	7	19	2	—	5	12	—	2	1	21	—	—	—	—	—	—
Prairie Warbler	8	—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Palm Warbler	149	8	6	32	5	*	3	27	30	—	—	—	—	—	34	3	—	—	—	—	—	—	—	—	—	—	—	—	1
Ovenbird	3	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellowthroat	88	22	1	12	18	*	11	9	—	—	—	—	—	—	5	—	—	1	9	—	—	—	—	—	—	—	—	—	—
Yellow-br. Chat	2	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
House Sparrow	4742	12	82	218	8	*	23	44	232	91	700	67	54	—	30	46	80	225	48	586	408	913	351	65	4	146	32	229	48
E. Meadowlark	3393	185	80	161	83	3	84	482	116	120	28	92	102	205	30	205	11	368	86	195	221	224	99	20	—	15	17	80	81
Red-wg. Blackbird	716,340	346	1,000	523	196	100	1,823	1,210	877	83	200	208	162	2442	340	150	—	142	794	100,145	203	6	605,000	—	319	—	—	65	6
Orchard Oriole	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Baltimore Oriole	257	—	17	4	—	—	—	—	46	—	79	24	1	2	—	1	13	13	5	3	*	43	6	—	—	—	—	—	—
Rusty Blackbird	173,889	—	2	10	50	200	37	348	12	—	—	2	105	—	3	60	—	51	9	—	—	—	173,000	—	—	—	—	—	—
Brewer's Blackbird	1503	—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	1,500	—	—	—	—	—	—
Boat-tailed Grackle	1845	547	37	276	468	62	101	354	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Com. Grackle	1,369,786	3	100	136	204	—	267	482	63	14	700	1	15	610	360	130	—	1150	21	500,075	257	66	864,000	301	34	13	713	21	50

Br.-hd. Cowbird – 113,802	—	4	—	—	—	12	263	1	41	21	25	—	220	700	85	7	75	30	70,438	2	286	41,500	25	—	—	—	65	2
Cardinal — 3301	55	48	84	43	13	114	225	118	7	12	99	23	90	71	45	38	264	288	282	427	433	106	31	2	52	102	141	88
Evening Grosbeak — 1997	97	*	2	—	—	20	—	12	—	16	31	—	22	—	6	150	105	250	68	29	78	20	36	14	11	236	68	726
Purple Finch — 2987	47	13	38	8	15	18	26	30	3	120	159	*	3	17	57	30	161	324	266	409	271	160	8	46	39	236	233	250
House Finch — 32	—	—	—	—	—	—	—	—	—	14	—	—	—	—	—	1	—	4	4	8	—	1	—	—	—	—	—	—
Pine Siskin — 1124	159	*	—	5	4	—	—	—	—	—	175	—	—	—	53	—	78	79	6	2	4	54	—	—	6	47	27	425
Am. Goldfinch — 2664	31	50	33	34	7	225	58	9	19	16	231	15	53	82	76	36	327	242	183	398	88	160	45	—	3	38	105	100
Red Crossbill — 177	5	—	—	—	—	—	—	—	—		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	172	—	—
Ruf.-sided Towhee — 1807	80	61	77	77	13	227	73	44	11	5	71	18	47	77	23	17	232	141	76	71	122	99	25	5	26	16	28	45
Ipswich Sparrow — 3	3	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Savannah Sparrow — 1424	152	102	80	85	12	15	66	16	7	40	58	2	506	6	69	—	73	75	1	—	—	16	—	—	—	40	3	—
Grasshopper Sp. — 28	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28	—	—
Henslow's Sparrow — 2	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sharp-tailed Sp. — 84	26	*	10	27	6	10	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seaside Sparrow — 127	14	1	16	77	3	8	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vesper Sparrow — 196	—	33	7	59	—	17	54	—	—	—	1	6	—	8	—	—	—	—	—	—	—	—	—	—	—	1	10	—
Bachman's Sparrow — 5	—	—	1	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Slate-colored Junco — 7186	—	30	14	50	11	46	59	112	11	80	411	17	5	95	89	126	1183	727	880	442	405	339	11	—	30	775	799	439
Tree Sparrow — 1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
Chipping Sparrow — 559	6	31	124	44	11	9	69	22	—	7	30	4	2	6	55	—	64	56	1	2	10	1	1	—	—	—	4	—
Field Sparrow — 2672	13	10	43	34	2	50	11	103	10	36	123	12	25	89	48	16	531	168	81	379	62	302	8	8	15	205	168	120
White-cr. Sparrow — 66	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	2	—	14	21	8	—	5	—	4	—	10	—
White-th. Sparrow — 7361	84	61	254	75	12	115	264	124	4	61	192	19	219	141	704	144	1215	911	364	607	313	119	216	12	103	239	247	542
Fox Sparrow — 286	21	1	18	6	*	47	5	7	*	4	45	—	2	11	6	—	8	79	1	4	1	1	3	—	11	2	3	*
Swamp Sparrow — 782	135	3	82	89	5	70	8	6	—	—	27	2	2	7	20	—	108	178	5	*	2	11	—	—	—	5	14	3
Song Sparrow — 3685	135	11	112	99	13	51	52	18	6	1	100	14	37	132	221	14	697	663	50	436	51	85	11	5	7	140	312	212
Lapland Longspur — 1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Snow Bunting — 2	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total No. Species — 222	154	123	161	142	115	148	147	94	57	73	86	53	66	72	89	43	86	77	81	75	84	82	59	28	40	70	64	57
Total No. Ind. —3,394,871**	56,008**	19,912	16,026	9,289	3,003	13,566	14,681	4,031	1,272	2,869	4,950	881	5,475	3,612	4,890	2,267	11,526	8,077	1,010,027	7,970	6,113	2,163,632	1,758	829	1,336	4,683	6,478	9,710
Field Observers — 417	22	8	25	13	10	27	41	13	3	5	6	2	8	7	4	9	25	16	32	22	16	26	10	1	12	11	15	28
Yard Observers — 90	0	0	1	0	0	0	0	6	0	5	5	2	0	2	2	0	3	0	1	0	34	2	6	0	14	1	5	1
Field Parties — 159	8	4	10	6	3	8	13	5	1	2	4	1	4	3	2	1	10	10	8	10	6	10	3	1	4	4	5	13
Party-hours — 1465	83	33	110.5	51	26	62	108	41	10	24	48	10	27	31	22	9	78	57	60	81	77	50	87	9	32	85.5	59	94
Party-miles — 5623	279	125	373	193	140	257	460	146	80	172	248	48	146	289	170	—	187	148	262	388	193	205	76	15	24	226	376	397

*Seen in count area during count period but not on count day
**Includes 740 "peep" sandpipers not listed in table

CHRISTMAS BIRD COUNT—1971

ELOISE F. POTTER

When CBC Christmas Bird Count observers tallied 215 species in 1965, someone who enjoys speculating about such things predicted that with good coverage as many as 230 species could be found in the Carolinas during a single count period. No one disagreed with the gentleman, but I seriously doubt anyone present expected to see his pipe dream come true. It hasn't yet, but the 1971 count comes very close with the record-breaking total of 222 species seen on count days plus three species seen in count areas during the count period.

Wilmington listed 161 species this year, followed by Bodie-Pea Island (154), Charleston (148), Hilton Head (147), and Southport (142). Greensboro and Charlotte with their blackbird roosts numbered over one and two million birds respectively, bringing the total individuals for all 28 count areas to about 3,400,000, less than half the number counted in 1960 when the huge roost was at Clemson.

Success of the 1971 Christmas count can be attributed to several factors: excellent coverage, a large number of capable observers working in small field parties adequately supplied with scopes, and the generally pleasant weather conditions that prevailed during the count period. Coverage was improved by the addition of four ecologically varied count areas. Southport and Litchfield-Pawley's Island fill the coastal gap that formerly existed between Wilmington and Charleston. At Roanoke Rapids four young people in two field parties and two yard observers found 89 species, only seven short of the record piedmont total set at Raleigh in 1966. Mount Mitchell (6,684 feet) is in the Yancey-McDowell count circle. Unfortunately cold temperatures (4 to 41 F) and high winds (gusts to 40 mph) kept the participants from finding many birds at the higher elevations, but the list of 70 species is remarkably good for the mountains in winter. Greensboro, Winston-Salem, and the Great Smoky Mountains also had unfavorable weather; thus 24 of the 28 count areas had moderately good to excellent field conditions with temperatures ranging at most places from well above freezing upward into the 60s or 70s with Dillon reporting a high of 80 F for the count day.

Comparison of the present count table with those of recent years indicates several bird population trends. 1) Red-tailed Hawks seem to be increasing while the Red-shouldered Hawks are decreasing. 2) Wintering Great Black-backed Gulls continue to increase in the Carolinas. 3) Golden-crowned Kinglets tend to be more abundant in relation to the number of Ruby-crowns in major northern finch invasion winters than in the off years. 4) More Evening Grosbeaks than ever before are in North and South Carolina this winter, but the unusually mild weather has made them slow to begin visiting feeders in large numbers. 5) Red-breasted Nuthatches, usually relatively abundant in major northern finch winters, are scarce this year with only 46 reported from 14 of 28 count localities compared to 417 from 25 of 28 localities in 1969. 6) House Finches are again present in the Carolinas, but they were reported from no new communities during the count period.

Through 1970 the all-time CBC Christmas Bird Count list included 264 species, only two of these having been seen in the count period but not on a count day. The 1971 census adds seven species;: Ross' Goose (Bodie-Pea Island), Golden Eagle (Charleston), Pomarine Jaeger (Bodie-Pea Island), Little Gull (Bodie-Pea Island), Blackpoll Warbler (Charleston), Orchard Oriole (Beaufort County, N. C.), and Lapland Longspur (Bodie-Pea Island). Thus far Pea Island NWR is the only place on the entire Atlantic seaboard that Ross' Goose has been reported, though the species occurs regularly in the Mississippi Valley. The Little Gull represents the second sight record for North Carolina, the first of the species having been found last winter by J. Merrill Lynch (see General Field Notes in this issue). The Blackpoll Warbler appears to be the first recorded winter visitor for the Carolinas. Details regarding these and other sightings of particular interest follow in the Compilers' Comments.

CBC CHRISTMAS BIRD COUNT STATISTICS

	1971*	1937-1970
Total number species	222	217 (1970)
Total number individuals	3,394,871	7,636,868 (1960)
Number count areas	28	29 (1966)
Total number observers	507	458 (1970)
Field parties	159	154 (1966)
Party-hours	1,465	1,098 (1966)
Party-miles	5,623	4,927 (1966)
Highest number species:		
Coast	Wilmington, 161	Wilmington, 164 (1961)
Coastal Plain	Beaufort Co., 94	New Bern, 95 (1966)
Piedmont	Roanoke Rapids, 89	Raleigh, 96 (1968)
Mountain	Yancey-McDowell, 70	Great Smoky Mt., 71 (1965)
Highest number individuals	Charlotte, 2,163,632	Clemson, 5,504,288 (1960)

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*Does not include late report from Greenville, S. C.

COMPILERS' COMMENTS

COAST

BODIE-PEA ISLAND, N. C. (center: 2.7 miles SSE of Bodie Island Lighthouse).

30 December. The four *Red-necked Grebes* were seen on the water at 100 and 150 yards in good light with 25X and 30X scopes by observers familiar with the species, P. A. DuMont, P.G. DuMont, Earrand, and Kennedy. The birds were not in a flock; two together and a single bird were on Bodie Island while the fourth was on Pea Island. One grebe carefully studied in flight had stocky body, long gray neck, stout bill, and conspicuous white cheek. Immature Brown Pelican was flying along ocean 31 December (Carter, H. and E. LeGrand). R. H. Peake saw the immature *Great Cormorant* at about 100 yards as it flew parallel to shore on Bodie Island; slow wing beat and white belly were carefully noted. This is second sight record for North Carolina in as many years. Both *Yellow-crowned Night Herons* (C. L. and S. M. Gifford) were adults on Bodie Island. *Ross' Goose* was studied at 75 yards with 30X scope as it fed in field with Canada and Snow Geese on Pea Island. The bird was an adult in immaculate plumage; small size and stubby bill without grinning patch were noted. The right foot was deformed indicating that it is probably the same individual first reported by Buckley (*Auk*, 86:551) and seen off and on over the past several years. This winter it has been present since mid-December according to Refuge Manager John Williamson. *Common Teal* male was in North Pond on Pea Island 31 December (Carter, H. and E. LeGrand). *Long-billed Dowitchers* (E. LeGrand, both DuMonts) gave single call note when flushed, and several had extremely long bills. Number of *Sanderlings* (4,500) is extremely high for season. Immature *Pomarine Jaeger* (Paul DuMont) was ½ mile offshore at Pea Island. White wing patches, mottled under parts, chunky body, and method of flight were studied through scope. Observer is familiar with this and other jaeger species. *Parasitic Jaeger* (Sykes) was in light phase with a slender body and white wing patches. It was about the same size as the several Ring-billed Gulls it chased at Pea Island. The 1,233 *Great Black-backed Gulls*

are probably the most ever recorded in North Carolina. The *Little Gull* (Ake, Sonneborn) was seen at close range from the U. S. Coast Guard Patrol Boat. Small size and rounded wings were noted by observers familiar with species. Three parties saw *Black-legged Kittiwakes*, 7 being sighted from land and 24 from the boat. This is the second year in a row that kittiwakes have been found in the count area, indicating the species may well winter regularly off the North Carolina coast in some numbers. *Saw-whet Owl* (Ake, Sonneborn) was in a building at the U. S. Coast Guard Station at Oregon Inlet on the northern tip of Pea Island. *Red Crossbills* (R. H. Peake) were seen and heard flying overhead on Bodie Island. Peake saw the *Lapland Longspur* on ocean dunes on Bodie Island for about half a minute; black slightly notched tail with white outer rectrices, rusty nape, and facial markings noted. The compiler appreciates the cooperation of U. S. Coast Guard personnel who allowed a count party to accompany them on the patrol boat. This added greatly to the success of the census.--PAUL W. SYKES JR., P. O. Box 2077, Delray Beach, Florida 33444.

[Recently published evidence that Ross' Geese interbreed with Lesser Snow Geese (Trauger et al., *Auk*, 88:856-875, 1971) caused some concern that the Pea Island bird might be a hybrid. Several zoology students who are aware of the hybridization problem studied the bird carefully after the count day and are convinced that this individual is indeed a Ross' Goose. They are preparing a field note for *Chat* detailing their observations.–ED.]

MOREHEAD CITY, N. C. (center: 0.7 mile NW of Crab Point in Newport River).

26 December. Increase in number of shorebirds is due to first Christmas Count coverage of Bird Shoal and Carrot Island just south of Beaufort. Bird Shoal is the roosting place for gulls and shorebirds as well as the carefully estimated 3,000 *Double-crested Cormorants.* Accuracy of the count-day estimate of 70 *Piping Plovers* was confirmed by careful study at Bird Shoal on 8 January. The number of Piping Plovers has been rather high at this location all fall with some increase after Thanksgiving. Both Semipalmated and Piping Plovers are rare elsewhere in the count circle in winter (Christmas to March). Eugene Pond reported three *Glossy Ibis* at Huntley's Impoundment regularly from late November to end of count period. The compiler saw the species there and elsewhere from 28 November through 9 January. These are the first winter records for area. The immature *Bald Eagle* (JF III) was sighted over Crab Point 1 January while it was being chased by Fish Crows. This is assumed to be the same indvidual Pond saw at Huntley's Impoundment 6 January. Over 500 *Laughing Gulls* were in count area on 19 December, but they left between 19 and 22 December in spite of warm weather, becoming very rare by 2 January. *Caspian Tern* at Huntley's Impoundment 2 January (JF III) was 3 to 4 weeks late, suggesting the possibility of wintering here.–JOHN O. FUSSELL III, Box 520, Morehead City, N. C.

WILMINGTON, N. C. (center: Myrtle Grove Junction)

18 December. *Black-legged Kittiwake* was seen by Frances Needham from a boat approximately 2 miles off Masonboro Beach with a flock of gulls. Harry Latimer III saw the *Swainson's Thrush* at Echo Farm; eye-ring seen distinctly in excellent light. Some other sightings unusual for the area at this season included *Whistling Swan* (Parnell), *Pigeon Hawk* (Carter), *Sandwich Tern* (Needham, Parnell), and *Eastern Kingbird* (Latimer).–FRANCES B. NEEDHAM, P. O. Box 204, Wrightsville Beach, N. C. 28480.

SOUTHPORT, N. C. (center: 33 deg. 54' N, 78 deg. 03' W).

19 December. *Least Bittern* was seen by Harry LeGrand--JAMES F. PARNELL, Route 3, Box 303F Wilmington, N. C. 28401.

LITCHFIELD-PAWLEY'S ISLAND, S. C. (center: entrance to North Litchfield Beach at US 17).

29 December. *Peregrine Falcon* (J. and M. Harrison) was wearing jesses and bells; compiler has seen one in area twice this fall. *Least Terns* (R. Probst) were feeding along

shore at Pawley's Island; observer knows species well, having raised one from downy to adult. *Short-eared Owl* (Clyde, Dabbs, McLean) flew in front of car and alighted to permit careful study. *Snow Buntings* (both Harrisons, F. Probst) at Murrell's Inlet were seen at close range through 40X scopes for about 30 minutes; all field marks checked.--FREDERICK PROBST, P. O. Box 386, Pawley's Island, S. C. 29585.

CHARLESTON, S. C. (center: 14 miles NE of Mt. Pleasant and ½ mile E of Hwy 17).
2 January. The *Golden Eagle* was an adult. This is an unusually late date for the *Blackpoll Warbler* in our area. The bird was in fall plumage, and M. T. Coleman studied it in good light at close range with an 8X50 binocular. Pine Warblers were in the immediate vicinity.--JULIAN R. HARRISON, Biology Department, College of Charleston, Charleston, S. C. 29401.

[The Blackpoll Warbler at Charleston appears to be the first winter record for the Carolinas. *South Carolina Bird Life* (1970) gives 14 November as the late date for fall migrants. In North Carolina a published record for November (Wingate and Baird, *Bird-Banding*, 36:192, 1965) comes from a bird captured on Bermuda in connection with a special study of Blackpoll migration. Banded as a juvenile on 11 October 1962, the warbler was found at Pembroke, N. C., in a decomposed condition in November 1963 (Wingate, pers. com.). Attempts to locate the lady who reported the band number to the Wildlife Protector have been unsuccessful, leaving the exact circumstances of the recovery in doubt. Apparently most Blackpolls migrate in fall directly across the western north Atlantic from New England and the middle Atlantic states to South America, thus by-passing the southeastern United States.–ED.]

HILTON HEAD ISLAND, S. C. (center: Spanish Wells Landing).
29 December. Caroline Newhall flushed the *Whip-poor-will* from a road at 5:35 AM. Davenport, McCaskey, and Newhall watched the *Common Merganser* fishing in a slough for several minutes. Orion and Alicia Hack and Alva Hines saw the *Barn Swallow*. Mature Bald Eagle was seen by Ann Dow; Grant and Elizabeth Simmons had sighted it earlier in count period.--ROBERT F. WHITNEY, Hilton Head, S. C. 29928.

COASTAL PLAIN

BEAUFORT COUNTY, N. C. (center: where Upper Goose Creek enters Pamlico River).
2 January. *Barn Swallows* (Ken Seal) were sitting on a wire. *Wood Thrush* (Seal) was followed until all field marks could be seen. *Ovenbirds* (Seal) nested in a large planned brush pile near feeders and have remained in area since then. *Orchard Oriole* has visited Hugh Sterling's feeder for past month. It accompanies Baltimore Orioles but feeds apart from them. Identity confirmed by Ethel Barkley; bird has black throat of young male. *Osprey* and *Black-and-white Warbler* really aren't unusual here any more in winter.--GERALDINE COX, Route 1, Box 115, Merritt, N. C. 28556.

PAMLICO COUNTY, N. C. (center: in Florence at intersection of 1324 and 1329).
26 December.--MARVIN TURNAGE, Route 1, Box 25, Bayboro, N. C. 28515.

ROCKY MOUNT, N. C. (center: Battleboro).
1 January. *House Finches* are routine, being present for third consecutive winter. Evening Grosbeaks are back but as yet not in large numbers.--JOHN L. THOMPSON, 500 Evergreen Road, Rocky Mount, N. C. 27801.

SOUTHERN PINES, N. C. (center: 3 miles NE of Southern Pines at Niagara).
23 December. Adult *Whistling Swans* (JHC) are first December record for area. *House Wren* (H. LeGrand) is second local winter record. *Spotted Sandpiper* (Mrs. Laurence Davis) has been present at Whispering Pines much of December.–J. H. CARTER III, P. O. Box 891. Southern Pines, N. C. 28387.

DILLON, S. C. (center: Dillon).
28 December.--JOHN H. WILSON, Box 535, Dillon, S. C. 29536.

COLUMBIA, S. C. (center: intersection of Gill Creek and Bluff Road).
27 December. The unusual record was the absence of a number of species that should have been seen. Ducks were missing from several ponds where they have been in the past. Evening Grosbeaks are earlier than usual.--GILBERT BRISTOW, 2921 Blossom Street, Columbia, S. C. 29205.

AIKEN, S. C. (center: Couchton).
26 December. *Cattle Egrets* (Cooper, Zippler) were in a pasture adjacent to South Edisto River. One bird was perched on the back of a cow. Roosts formerly occupied by Robins, Starlings, Red-winged Blackbirds, and Brown-headed Cowbirds were almost deserted. --GERALD E. KNIGHTON, 304 Kirby Drive, North Augusta, S. C. 29841.

PIEDMONT

ROANOKE RAPIDS, N. C. (center: intersection of Seaboard Coastline RR tracks and Weldon city limits to include portions of Roanoke Rapids Lake, Roanoke River, Occoneechee Neck, Roanoke Rapids, Weldon, and Halifax).
31 December. This is a new count. Six observers found 89 species, and all the good spots were not visited for lack of time. Several other competent observers might boost our total to 100 species. The *Common Egret* (Lynch, Marsh) had been at a farm pond all month; first winter record for area. The 114 *Black Vultures* were counted as they left a roost in two flocks numbering 70 and 44 birds (Lynch, Marsh). The roost is located in a large swamp along the Roanoke River. The unusually large concentration of 66 *Common Snipe* was in the marshy borders of a single farm pond in Occoneechee Neck (Lynch, Marsh). Usually no more than 15 are found during winter in count area. The *Orange-crowned Warbler* was at Roanoke Rapids foraging in a water oak on 23 December.--J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N. C. 27870.

HENDERSON, N. C. (center: Henderson).
29 December. *House Finch* present for third consecutive winter.--Mr. and Mrs. A. W. BACHMAN, 111 Jeannette Avenue, Henderson, N. C. 27536.

RALEIGH, N. C. (center: Norfolk Southern RR and Lake Wheeler Road intersection).
1 January. Male *Red-breasted Merganser* (Collier, Hader, Marsh) was at Lake Benson. Four *House Wrens* (three parties) represent a good count for this late in the season. *Red-tailed Hawks* appear to be replacing the *Red-shouldered* in this area.--HARRY E. LeGRAND JR., 331 Yadkin Drive, Raleigh, N. C. 27609.

CHAPEL HILL, N. C. (center: intersection of Franklin and Columbia Streets).
2 January. Tallies of American Woodcocks, Water Pipits, Evening Grosbeaks, and Savannah Sparrows are double or more the highest in the previous 10 counts. Although there have been occasional winter records in recent years, our count of 9 *Yellowthroats* (3 parties) was unprecedented.--JAMES O. PULLMAN, Route 6, Box 149, Chapel Hill, N. C. 27514.

GREENSBORO, N. C. (center: Radio Station WBIG transmitter).
1 January. The Allens and Benjamin Lambeth estimated a million Starlings, Red-winged Blackbirds, Common Grackles, and Brown-headed Cowbirds entered a roost in the count area between 4:30 and 5:30 PM on the count day.--DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N. C. 27408.

WINSTON-SALEM, N. C. (center: intersection Silas Creek Pkwy and I-40).
2 January. *Tree Sparrow* (J. Shiffert) was studied carefully with Field Sparrows for comparison.--C. ROYCE HOUGH, 713 Lankashire Road, Winston-Salem, N. C. 27106.

STANLY COUNTY, N. C. (center: about 2 miles NW of Badin).

1 January. *Bald Eagle* was sighted by four people including Joe Ferrebee; bird had been in area since first week in December. The Goforths have been hearing the *Saw-whet Owl* in the Girl Scout area. Our 84 species are an all-time high for count area!--VIVIAN M. WHITLOCK, Box 219, Albemarle, N. C. 28001.

[The Saw-whet calling record is acceptable only because it does not change the known range of the species for the season of the year. On many occasions these owls and spring peepers can, according to Marcus B. Simpson Jr., sound confusingly alike.--ED.]

CHARLOTTE, N. C. (center: intersection of South Boulevard and Woodlawn Road).

31 December. Female *House Finch* has been present at Norwood feeder since 19 November. Sayward estimated the population of the Starling and blackbird roost at 2,160,000 birds. He found the *Brewer's Blackbirds* among the outbound flight from the roost on count morning. Familiar with the species from numerous trips to western states, he had good views of two individuals in his yard later in the day. Elizabeth Clarkson also noted Brewer's Blackbirds during the count period. Highest Christmas count in 29 years.--JOE AND BECKY NORWOOD, 1329 Goodwin Avenue, Charlotte, N. C. 28205.

GREENVILLE, S. C. (center: Hwy 29-291).

1 January. Weather cloudy and cold with sleet, wind 5 mph. Twelve observers in 3 parties; 27 party-hours; 70 party-miles. Total species, 47; total individuals, 4,017. [This report was recieved 27 January 1972, the day after Christmas count copy was taken to the typesetter.--ED.]

SPECIES: 1 Pied-billed Grebe, 7 Mallard, 15 Turkey Vulture, 2 Red-tailed Hawk, 1 Marsh Hawk, 2 Sparrow Hawk, 21 American Coot, 3 Killdeer, 42 Rock Dove, 9 Mourning Dove, 1 Belted Kingfisher, 5 Yellow-shafted Flicker, 2 Red-bellied Woodpecker, 1 Red-headed Woodpecker, 2 Yellow-bellied Sapsucker, 1 Hairy Woodpecker, 5 Downy Woodpecker, 4 Eastern Phoebe, 4 Horned Lark, 60 Blue Jay, 56 Common Crow, 17 Carolina Chickadee, 11 Tufted Titmouse, 2 Brown-headed Nuthatch, 3 Brown Creeper, 6 Carolina Wren, 27 Mockingbird, 3 Brown Thrasher, 5 Robin, 4 Eastern Bluebird, 3 Ruby-crowned Kinglet, 60 Ceder Waxwing, 3 Loggerhead Shrike, 2,200 Starling, 1 Myrtle Warbler, 19 House Sparrow, 80 Eastern Meadlowlark, 500 Red-winged Blackbird, 530 Common Grackle, 28 Cardinal, 5 Purple Finch, 32 American Goldfinch, 18 Rufous-sided Towhee, 170 Slate-colored Junco, 16 Field Sparrow, 25 White-throated Sparrow, 5 Song Sparrow.

OBSERVERS: Wilma Abrams, Mollie Cooper, Mr. and Mrs. Ed Daily (Junction City, Kansas), Ruth Gilreath, Gladys Hart, Lillie Hart, Rosa Lee Hart, Arnette Howell, John Howell, Martha Lawrence, May Puett.--ROSA LEE HART, Route 1, Travelers Rest, S.C. 29690.

ELKIN-RONDA, N. C. (center: 3 miles N of Elkin on US 21).

26 December. *Common Snipe* (J. Tysinger, Masten, Smith) is second Christmas sighting in 22 years.--LIN HENDREN, Box 148, Elkin, N. C. 28621.

NORTH WILKESBORO, N. C. (center: North Wilkesboro).

28 December. Scarcity of *Tufted Titmice* has no obvious cause. Last fall they seemed more common than usual, and on previous counts they have always been more numerous than Carolina Chickadees. I was surprised at the number of *Red-winged Blackbirds* on or close to the corn acreage used for feeding pigs. It contained a stand of great ragweed, the seeds of which blackbirds apparently eat with avidity.--WENDELL P. SMITH, 911 E Street, North Wilkesboro, N. C. 28659.

CALDWELL COUNTY, N. C. (center: Lenoir).

30 December.--HELEN MYERS, 310 Beall Street, Lenoir, N. C. 28645.

MOUNTAIN

YANCEY-McDOWELL COUNTIES, N. C. (center: 2.3 miles S of Buck Creek Gap on NC 80).

18 December. This is a new count area with elevations ranging from 1,223 to 6,684 feet. High winds and a temperature range from 4 to 9 F made birding on Mt. Mitchell unbearable. Only two species and six individuals were observed there--4 Ravens and 2 Slate-colored Juncos.--ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N. C. 28778.

BUNCOMBE COUNTY, N. C. (center: 300 Wilson Avenue, Swannanoa).

31 December. *Common Snipe* (Penford) was again found at Warren Wilson College. Large increase seen in the bluebird population in the mountains. Eight *White-crowned Sparrows* including both adults and young of year, were near Juvenile Evaluation Center, Swannanoa (Holland, S. Merrick, RCR).--ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N. C. 28778.

GREAT SMOKY MOUNTAINS NATIONAL PARK, N. C.-TENN. (center: Bullhead).

2 January. This is the first time in last 12 years that *Turkeys* have been seen on the count. The numbers of *Robins* (5,004) and *Evening Grosbeaks* (726) are the largest ever recorded for these species on this count.--RICHARD C. ZANI, Route 2, Box 181, Gatlingburg, Tenn. 37738.

OBSERVERS

BODIE-PEA ISLAND, N. C.: Robert L. Ake, Micou M. Browne, J. H. Carter, Paul G. DuMont, Philip A. DuMont, John Earrand Jr., Wavell W. Fogleman, Clay L. Gifford, Samuel M. Gifford, Robert S. Kennedy, Edmund K. LeGrand, Harry E. LeGrand Jr., Edward Merkle, Henry Merkle, Dwight E. Peake, Richard H. Peake Jr., H. Douglas Pratt, David W. Sonneborn, Paul W. Sykes Jr., Bill Williams, John Williamson, Mark A. Williamson.

MOREHEAD CITY, N. C.: John Fussell II, John Fussell III, Will Hon, Charles Lincoln, Bob Simpson, Mary Simpson, Dick Williams, Doris Williams.

WILMINGTON, N. C.: Mrs. Cecil Appleberry, Bobby Austin, J. H. Carter III, Frank Chapman, Bill Collier, Evelyn Dabbs, Dot Earle, Keith Farmer, Haskell Hart, Patrick Hunt, Kitty Kosh, Harry Latimer III, Edmund LeGrand, Harry LeGrand, J. Merrill Lynch, Chris Marsh, Polly Mebane, Prissy Mebane, Frances Needham, Carl and Mary Newhous, James F. Parnell, Mrs. Lenwood Roberts, Elizabeth and Robert Teulings, Mrs. J. M. Waggett.

SOUTHPORT, N. C.: Jay Carter, Bill Collier, Edmund LeGrand, Harry LeGrand, Merrill Lynch, Chris Marsh, Franklin McBride, Frances Needham, James Parnell, Frederick Probst, Elizabeth Teulings, Robert Teulings, John Wright.

LITCHFIELD-PAWLEY'S ISLAND, S. C.: Calvin Clyde, Evelyn Dabbs, Dennis Forsythe, Julian Harrison, Margaret Harrison, David McLean, Perry Nugent, Frederick Probst, Renee Probst, Ann Townsend.

CHARLESTON, S. C.: William D. Anderson, Roy E. Baker, Edwin L. Blitch, David M. Cline, Calvin Clyde, Mrs. R. H. Coleman, M. Teague Coleman, Ernest A. Cutts, John Henry Dick, Kenneth A. Dodds, Mrs. D. L. Fleischmann, Melanie Fleischmann, Dennis M. Forsythe, Julian R. Harrison, S. C. Langston, Peter Manigault, Isaac S. H. Metcalf, John S. Metcalf, Thomas E. Metcalf, Anne-Marie C. Noe, Perry E. Nugent, Frederick M. Probst, Waddell F. Robey, C. S. Farley Smith, Nelson W. Taylor, Rufus W. Watkins, Arthur M. Wilcox.

HILTON HEAD ISLAND, S. C.: Charles Atherton, Peter Ballantine, Gordon Benford, Seward and Doris Bowers, Nancy Butler, Alice Chapman, Lester Davenport, Dorothy Dorsey, Anne Dow, Marjorie Fowler, Orion and Alicia Hack, Billie Hack, John and Mabs Hannold, David and Virginia Harrall, Alva Hines, Isabel Hurst, Charlotte and Edith Inglesby, Jack and Betty Jordan, Bruce King, Henry and Mildred Lawrence, Helen Loriot, Imogene Lowden, Glen McCaskey, Violet McIntosh, Caroline

Newhall, Helene Parry, Keith and Berrl Pitcairn, Anne and Marie Reddy, Grant Simmons, Mary Smith, Robert and Elizabeth Whitney.

BEAUFORT COUNTY, N. C.: John Althouse, Ethel Barkley, Mary Emily Brown, Geraldine Cox, Roger Greene, Ethel Jensen, Bobby MacKenzie, Toddy MacKenzie, James McLaurin, Mary McLaurin, Polly Rowlett, Louise Satterthwaite, Bea Seal, Ken Seal, Mary Lee Smith, Elizabeth Sterling, Hugh Sterling, Marvin Turnage, Mary Wilson.

PAMLICO COUNTY, N. C.: Geraldine Cox, Roger Greene, Marvin Turnage.

ROCKY MOUNT, N. C.: Joyce Bennett, Stephen Bennett Sr., Sarah A. Speight, E. Carr Speight, Estelle Thomas, Harvey Thomas, John L. Thompson, Mrs. M. J. Warner.

SOUTHERN PINES, N. C.: Eleanor Carter, J. H. Carter III, Mrs. Laurence Davis, Edmund LeGrand, Harry LeGrand, Frances Parnell, James F. Parnell, Mary K. Wintyen, Lura Williams, Ethel Wotton, John Wright.

DILLON, S. C.: Lois McCallum, Rick McCallum, John Wilson, Johnny Wilson.

COLUMBIA, S. C.: Gilbert Bristow, William Bunch, Miriam Davis, Frank Hill Jr., Helen Kendall, Jeanette MaHoney, Robert Overing, Emma Walker.

AIKEN, S. C.: Jeannine Angerman, Jack Cooper, Helen Mary Fenninger, John Hatcher, M. Ray Holzworth, Gerlad Knighton, Tom Rial, Dennis Villemain, Calvin Zippler.

ROANOKE RAPIDS, N. C.: Marjorie Cannon, Bill Collier, Louise Hutchinson, J. Merrill Lynch, Chris Marsh, Louise Parker.

HENDERSON, N. C.: Mr. and Mrs. A. W. Bachman, Ruth Carter, Mrs. Walter Dallas, Walter Dallas Jr., Mrs. S. R. Harris, Karen Spivey, Dr. and Mrs. Paul Stewart.

RALEIGH, N. C.: Mike Browne, Ella Chalfant, Bill Collier, Charlotte Hilton Green, R. J. Hader, Jeanne Halsey, Ray Halsey, Margaret Hobgood, Roberta Horton, Mabel Jones, David Knapp, Kenneth T. Knapp, Janice Lee, Joshua A. Lee, Edmund LeGrand, Harry LeGrand, Chris Marsh, Marilyn Middleton, Mrs. Ben Smith, Elizabeth Teulings, Robert Teulings, Gwenn Turbiville, Melynda Turbiville, Gail Whitehurst, Michael Wilcox, Pamela Wilcox, Ida Lee Winkler, Ray L. Winstead.

CHAPEL HILL, N. C.: Pauline Butler, Louise Crumpacker, Alexander Hull, Elinor Irvin, J. Logan Irvin, Edwin Lappi, Nellie Lappi, Simon Lappi, Edmund LeGrand, Harry LeGrand, Gertrude London, Mrs. Paul Payne, James O. Pullman, Wilma Stuart, Elizabeth Teulings, Robert Teulings, Eleanor Wagstaff.

GREENSBORO, N. C.: Carolyn Allen, Donald Allen, Rose Avery, Mrs. W. Locke Bell, Fred Berry, Mrs. David Cason, Inez Coldwell, Larry Crawford, Charlotte Dawley, Mr. and Mrs. Frank Fish, Dorothy Garrett, Jean Gertz, Mrs. Al Groves, Sidney Holmes, Mr. and Mrs. Benjamin Lambeth, Jean McCoy, Ethel McNairy, Ida Mitchell, Donald Nelson, Elizabeth Ogburn, Cora Parsons, Mrs. G. W. Perrett, Etta Schiffman, Virginia Seawell, Mrs. W. F. Smyre, Thomas Street, Marjorie Tays, William Tays, Daphne Weisner, Maude Williams, Helen Zuk.

WINSTON-SALEM, N. C.: Fran Baldwin, William Boice, Charles Frost, Gardner Gidley, Margaret Gidley, Thomas Gossett, Bill Hammond, Ruth Hill, Royce Hough, Wayne Irvin, Joyce Isom, Dwight Lee, Polyanna Lee, Ann Listokin, Paul Nifong, Jackie Shelton, Dorothy Shiffert, Jerry Shiffert, Ramona Snavely, C. Sommer, Edith Spinks, Robert Witherington.

STANLY COUNTY, N. C.: Edwin C. Clarke, Margaret Crawley, Barrett Crook, Vera Crook, Mary Crump, Pauline Culp, Richard Culp, Nelle Dotson, Mary Jane Dyer, Nina Eudy, Joe Ferrebee, Virginia Foglio, Naomi Goforth, Terry Hahn, Louise Hammill, Edward Harris, Lectie Harwood, Anne Hatley, Bill Hatley, Frances Hinson, Nelle Hinson, Jean Honeycutt, Annette Isenhour, Maxine Isenhour, Mike Isenhour, Myrtle Isenhour, Ruth Kearns, Vera Littleton, Cindy Lowder, Fisher Maner, Wilmetta Maner, Susan Manley, Gladys Mason, Vera Mason, Doris Mauney, James Mauney, Lela McJunkins, Annie Misenheimer, Grace Morris, Harold Morris, Anne Olsen, Spencer Plyler, Jennie Ruth Plyler, Louise Rice, Nana Sweacker, Ethel Trantham, John Trantham, Addie Thompson, John Whitlock, Vivian Whitlock.

CHARLOTTE, N. C.: Genevieve Barber, Sue Bell, Elsie Brewer, Elizabeth B. Clarkson, Flo Cobey, Adrain and Beth Dykema, Susan Ennett, Jack Fehon, Gwen Fenninger, Lucius Gage Jr., Jack Hamilton, Bowman Kelly, Irene Kittinger, Brem Mayer, Elizabeth Millwee, Joe and Becky Norwood, Mary Nowlin, Sam Parker, Shuford and Katherine Peeler, Doug Pratt, Al Ross, Bill Sayward, Bill Smith, Hallam Walker, Polly Weathers (Mecklenburg Audubon Society).

ELKIN-RONDA, N. C.: J. H. Beeson, Alex Biggs, T. R. Bryan, H. F. Cochrane, Sidney Fletcher, Lin Hendren, Ola Hendren, Tom Hendren, Clara Henderson, E. M. Hodel, Fred Masten Jr., Lewis Petree, Wendell P. Smith, Bobby Tysinger, Jerry Tysinger, Jim Uldrick.

NORTH WILKESBORO, N. C.: Wendell P. Smith.

CALDWELL COUNTY, N. C.: Nancy Alexander, Miriam Bachar, Mrs. Glen Barnes, Isabel Bernhardt, Mrs. Murray Bruner, Mrs. Horace Craig, Iolita Ersland, Lois Gossler, Mary Greer, Mrs. Mason Hollifield, Mrs. Ben Howard, Mr. and Mrs. Garvin Hughes, Lois Laxton, Mr. and Mrs. E. M. Manchester, Mr. and Mrs. Fred May, Helen Myers, Thomas Parks, Mrs. Carl Prestwood, Mrs. C. S. Warren, Joyce Whitman, Ann Wilcox, (Miss) George Wilcox, Mrs. Jim Wood.

YANCEY-McDOWELL COUNTIES, N. C.: Marjorie Davis, Bill Duyck, John Hall, Joseph Hall, Joy Hall, Joyce Hall, Mark Hall, Walter Hall, Blaine Ray, Robert Ruiz, Peter Sargent, Roland Sargent.

BUNCOMBE COUNTY, N. C.: T. J. Enright, John Hall, Joseph Hall, Joy Hall, Joyce Hall, Mark Hall, Walter Hall, Walter Holland Jr., Daniel McKay, Gordon Mahy, Mrs. E. T. Merrick, Sue Merrick, Ellen Penford, William Penford, Betty Ruiz, Robert Ruiz, Doris Sargent, Roland Sargent, Thomas Wood, Keith Wright.

GREAT SMOKY MOUNTAINS NATIONAL PARK, N. C.-TENN.: Fred J. Alsop III, James M. Campbell, Mary F. Davidson, Dave Hassler, Robbie Hassler, Tony Koella, Betty Lewelling, Joe Lewelling, Terri McCown, Murial Monroe, Robert Monroe, Andy Morton, Cynthia Muffley, Gary Muffley, Chuck Nicholson, Louise Nunnally, Mrs. Sterling Ryder, A. Boyd Sharp Jr., Mary Sharp, Johnetta Smith, Louis F. Smith Jr., Jerry Spangler, James T. Tanner, Bill Williams, Irene Williams, Mrs. Clarence Wodtke, George R. Wood, Hedy L. Wood, Richard C. Zani.

BRIEFS FOR THE FILES (Continued from page 37)

INDIGO BUNTING: Harry LeGrand noted rather late individuals at Raleigh on 27 October and at Pea Island on 30 October.

DICKCISSEL: One was present at Mrs. P. M. Hunt's feeder in Wilmington, N. C., on 27 October, fide Dot Earle.

HOUSE FINCH: A single male was a regular visitor, usually in the company of House Sparrows, at Susan and Bill Hammond's backyard feeder in Winston-Salem from 17 May through 6 July. No female was seen.

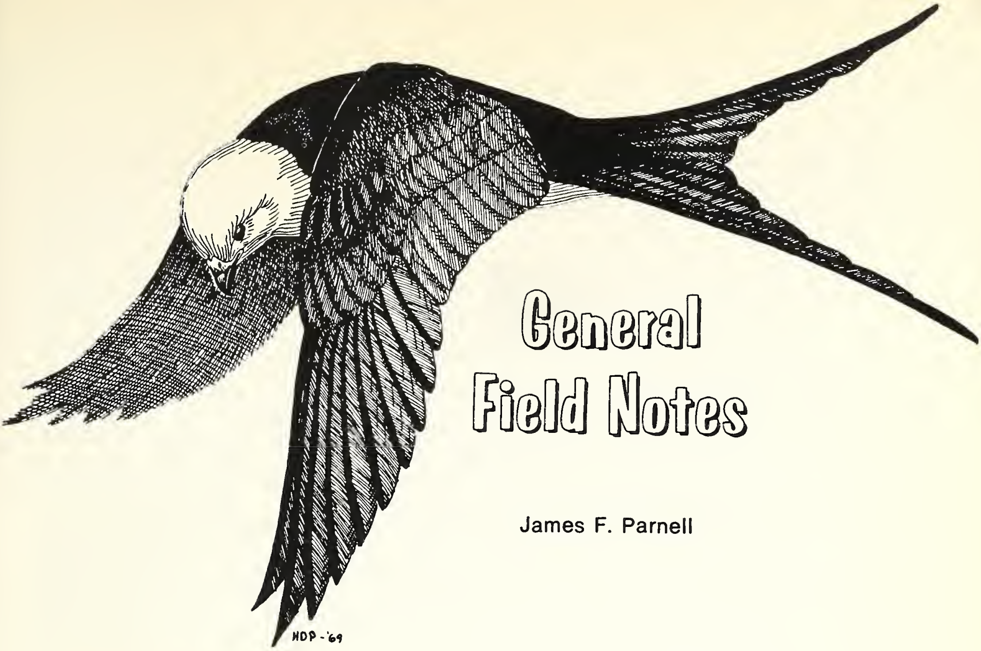
GRASSHOPPER SPARROW: One was unusually late at Raleigh on 12 November, Harry and Edmund LeGrand.

LARK SPARROW: One was seen by several groups of observers at Bodie Island lighthouse on 25 September, and another was seen at the north end of Pea Island on 10 October by Robert Ake and party. Elsewhere, one was sighted at Orton Plantation in Brunswick County, N. C., on 28 August by Jay Carter and Frances Needham.

BACHMAN'S SPARROW: A rare local occurrence was recorded at Chapel Hill, N. C., where a single bird was carefully studied by James Pullman at Mason Farm on 16 October.

LINCOLN'S SPARROW: A specimen was found dead at Wrightsville Beach on 24 October by Jay Carter. Another fall occurrence was noted on the coast at Bodie Island where a single bird was seen on 10 October by Robert Ake and party. Inland, one was seen at North Wilkesboro, N. C., on 12 October by Wendell Smith.

SNOW BUNTING: Jay Carter and Frances Needham sighted two at Wrightsville Beach, N.C. on 17 November.



General Field Notes

James F. Parnell

Leach's Petrel in North Carolina

CHARLES R. BLEM
Virginia Commonwealth University
Department of Biology, Academic Division
Richmond, Virginia 23220

DAVID W. SONNEBORN
Virginia Commonwealth University
Department of Anatomy, Health Sciences Division
Richmond, Virginia 23220

27 October 1971

Although Leach's Petrel *(Oceanodroma leucorrhoa)* is irregulary observed during migration along the eastern coast of the United States, we know of no specimens from North Carolina. The following is therefore of interest. After a northeast storm during the first week of November 1969, an individual of this species was found alive on the beach at Kill Devil Hill, N.C., by Thornton Staples. The bird died, and because it came into our possession in a partly decomposed condition, was preserved by freeze-drying. It is now on deposit at the United States National Museum (USNM 564835). Measurements (mm) for the bird are: wing (flat) 165, tail 85, and exposed culmen 16. The identity of the specimen was confirmed to be *O. leucorrhoa* by the USNM staff and by Eugene Eisenmann. The sex of this individual is unknown due to the method of preservation.

On the Atlantic side of North America, Leach's Petrel breeds from Greenland south to Massachusetts and wanders widely during the winter. It is seen irregularly since it seldom follows ships as do other petrels. Although the present record is apparently the first specimen of Leach's Petrel from North Carolina, it is also one of the latest recorded occurrences of this species in eastern North America. Therefore it probably is not representative of the time when Leach's Petrel usually occurs in North Carolina.

[Dept. Ed.–With the publication of this report and the deposition of the specimen in the U.S. National Museum, Leach's Petrel can now be added to the official North Carolina Bird List.]

Little Gull at Roanoke Rapids, N. C.

J. MERRILL LYNCH
539 Henry St.
Roanoke Rapids, N. C. 27870

September 1, 1971

On 29 August 1971 between 7:00 and 9:00 AM, I was able to study very carefully and leisurely a Little Gull *(Larus minutus)* at Roanoke Rapids Lake at Roanoke Rapids, N.C. I studied the gull with 7x50 binoculars in flight within 50 ft. of me and perched on a stake about 200 ft. from shore. The morning was bright and clear and light conditions were perfect with the sun at my back.

In flight, the gull's wings appeared dark gray on both upper and lower surfaces. The underside of its primaries were conspicuously darker than the wing lining and secondaries. The uniform dark wings without any white markings immediately separated it from either the Bonaparte's or Black-Headed Gull. Its back feathers were an unbarred brownish, a peculiar mark that I could not find pictured in any of the field guides. It was probably a sub-adult. Its fan-shaped tail was a lighter gray than the wings.

The most conclusive evidence was the gull's distinct head markings, seen very well in flight at close range. There was a distinct black spot just behind the eye. Above this spot was a black patch that extended across the back of the head behind the eye. Its black bill was small and slender. The head was almost identical to the one pictured in Robbins et allii's *Birds of North America.* No other small gull has this head pattern. These field marks were checked and rechecked many times as the bird flew by.

The extremely small size of this gull thoroughly convinced me of the identification. A comparison was made when it flew directly over a Pied-billed Grebe; it appeared slightly shorter lengthwise than the grebe. It appeared much like a very dark tern in flight.

This observation was made only two days after the passage of tropical storm Doria up the North Carolina coast. There is good reason to believe that this gull's appearance could have been related to the storm since it is a well known fact that hurricanes regularly blow pelagic species off course. Realizing this was an extremely rare sighting, I contacted Dr. and Mrs. Robert P. Teulings and Harry and Edmund LeGrand. They came to Roanoke Rapids on the day of the sighting and we searched for the gull without success.

I have not been able to find it since.

[Dept. Ed.----This appears to be the first record of this European gull in North Carolina. It is a rare but regular straggler along the East Coast north of North Carolina. On the basis of this observation, the Little Gull can be placed on the hypothetical list for North Carolina. See 1971 Christmas count reports in *The Chat* for a second observation in North Carolina and *American Birds* for observations in southeastern Virginia.]

Early Records for Pelagic Birds Off the North Carolina Coast

FRANK ENDERS
Division of Research
N.C. Department of Mental Health, Raleigh, N.C.

1 August 1969

On Friday and Saturday, 26 and 27 April 1969, I was on the R.V. *Eastward*, Duke University's oceanographic research vessel, SE of Cape Lookout, N.C. I maintained a continous watch for birds all day Friday and on Saturday from dawn to 07:30 with 8x40 binoculars and, whenever possible, with a 20x60 spotting scope.

Numerous Laughing Gulls and a few Herring Gulls were within 25 miles of shore. All pelagic birds were beyond 50 miles from shore. These observations are listed below in chronological order.

Friday, 26 April 1969
16:30–1 Wilson's Petrel. 34 degrees 03' N, 76 degrees 05' W, 51 miles offshore.
18:00–1 Audubon's Shearwater: small black and white shearwater with rapidly beating wings. Came to within 120 yards of ship. 34 degrees 05.7' N, 76 degrees 00.8' W, 51 miles offshore.

Saturday, 27 April 1969
06:30–1 Greater Shearwater and 1 unidentified shearwater. 33 degrees 51' N, 75 degrees 46' W, 65 miles offshore.

07:30–1 Greater Shearwater; 3 unidentified shearwaters; 8 Wilson's Petrels. The petrels seemed to be following a "white-tipped" shark when first seen. The petrels followed the ship for a short while, apparently trying to feed on ham thrown overboard as bait for the shark. All were seen within a mile of 06:30 position.

Shearwaters listed as "unidentified" were large, probably either Greater or Sooty, but they were too far away for identification.

I am familiar with both Greater Shearwater and Wilson's Petrel from boat trips off Long Island and in the Bay of Fundy. Although this sighting of Audubon's Shearwater was my first one, the bird definitely was not a Greater Shearwater as it lacked the whitish rump, larger size, and more leisurely wingbeat of that species. Moreoever, its wingbeat was faster than that of the Manx Shearwater (which I have seen once in company with more experienced observers); the process of elimination combined with the area in which I saw the bird (Gulf Stream) makes me reasonably certain it was, indeed, an early Audubon's Shearwater. For a full discussion of the field identification of "black and white shearwaters" see Peter Post's "The Occurrence and Field Identification of Small 'Black and White Shearwaters' in New York" in *The Kingbird*, 14:133-140, 1964.

The sighting of these birds was very early. *Birds of North Carolina* (Pearson, Brimley and Brimley, 1942) gives the following early dates: Audubon's Shearwater, 6 July; Greater Shearwater, 22 June; and Wilson's Petrel, 27 May.

There are, however, earlier records for the Greater Shearwater on 1 May 1965 off Long Island, New York. (*Audubon Field Notes,* 19:455) and 21 April 1911 in Massachusetts, (*The Birds of Cape Cod, Mass.*, 1965). Palmer in *The Handbook of North American Birds* (1962) states that occasional Greater Shearwaters are found in the north Atlantic in June, and that the Wilson's Petrel reaches 30 degrees N latitude by the third week of April on the ocean, and only later moves inshore. There is also a record of Wilson's Petrel on 20 May 1967 at Ocean City, Maryland (*Audubon Field Notes,* 21:493).

From the above records it is clear that my observations of the Wilson's Petrel and Greater Shearwater are not unprecedented. Indeed, it would seem that such early occurrence, for the petrel at least, is probably standard. In any event, these records for all three species are the earliest known for North Carolina.

[Dept. Ed.--Records of pelagic birds off the North Carolina coast are very scarce, and the timing of occurrences of most species is based only on fragmentary local data coupled with somewhat better data on arrival and departure from the breeding areas. Thus, additional records such as the above are always valuable.]

Breeding Range Extension Of the Blue-winged Teal into Southeastern North Carolina

GILBERT S. GRANT
Route 1, Box 563, Sneads Ferry, N.C.
11 July 1970

The southernmost breeding site of the Blue-winged Teal *(Anas discors orphna)* along the Atlantic coast is given as northeastern North Carolina (Pea and Bodie Islands) by the

A.O.U. Check-list (1957) and by J.F. Parnell (The Populations, Breeding Biology, and Environmental Relations of Three Species of Waterfowl at Pea and Bodie Islands, North Carolina, Proc. Conf. Southeastern Assoc. Game and Fish Comm., 1960 p. 53-67).

However, evidence of nesting in an impoundment at West Onslow Beach, near Sneads Ferry in Onslow County, N.C., was discovered in 1969. This location is about 150 air miles SW of the Bodie and Pea Island colonies. I found seven adults and two young (unable to fly) at this impoundment on 22 June 1969 (*Chat*, 33:106). I was unable to search the area intensively for nests in 1969, but in 1970 I made several trips into this impoundment. On 31 May 1970 I found 9 Blue-winged Teal nests with clutches ranging from 3 to 12 eggs and averaging 7.67 eggs per nest. The nests were constructed of sedges and most were located on small patches of ground a foot or two above the water level. A few were fastened to grasses and suspended above water. I returned on 15 June 1970 to find all but two nests had apparently hatched successfully. The eggs in one nest were still being incubated while the remaining nest had spilled its eggs into the water. These were full clutches as 21 to 23 days are required for incubation (Jour. Wildl. Mgm., 20 (1):28-46) and my two visits were only 2 weeks apart. A count of 20 adult Blue-winged Teal was recorded on 31 May 1970, which indicates practically all birds present were nesting. A partial count on 6 July 1970 disclosed at least 40 teal in the impoundment.

This impoundment was constructed about 4 years ago and is managed by a duck hunting club. The water level cannot be manipulated and the depth of the water varies with the rainfall. The construction of this impoundment at West Onslow Beach has created improved nesting and rearing habitats for the Blue-winged Teal as is the case at the Pea and Bodie Island impoundments (Parnell, *op. cit.*) and thus made it favorable for this breeding range extension.

Unusual Nesting Site for Tufted Titmouse

J.H. CARTER III
P.O. Box 891, Southern Pines, N.C.

10 August 1971

On 8 May 1970 a neighbor in Southern Pines, Moore County, N.C., called and informed me that their dog had overturned the hollow base of a pottery bird bath, revealing a nest with young birds inside. When I arrived, I found the nest on the ground inside the base where the neighbor had replaced it. The nest contained five young Tufted Titmice *(Parus bicolor)*, with pin-feathers just appearing.

The nest was square, measuring 5x5 inches, and it was ¾ inch thick. It was a typical titmouse nest in its make-up. The base stood upright and was about 2 ½ feet tall. It was cylindrical with a large bottom, narrower neck, and a flared out rim around the opening in its top. Habitat was a mature stand of loblolly pine *(Pinus taeda)*, open on one side and with a second growth of dogwood *(Cornus florida))* on the other side.

I placed several cinder blocks around the base to prevent dogs from overturning it again. Afterwards, both parent titmice were observed coming to feed the young. They would alight on the rim of the base and drop down inside. They were easily caught by hand while inside the base. Both wore bands that I had placed on them in my yard, which is situated nearby.

On 19 May all five young were well feathered and appeared ready to leave the nest. It seemed impossible for them to get out, as they would have to fly 2 ½ feet straight up or climb the very slick walls. I therefore removed and released them nearby.

Titmice normally nest in cavities and crevices in trees, and also make frequent use of bird houses. In Bent's *Life Histories* (U. S. Nat. Mus., Bull. 171, p. 394-396) nest heights of from 3 to 97 feet are mentioned, thus ground nesting appears very unusual.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N. C. 27514
(All dates 1971)

COMMON LOON: An early fall migrant was noted at Roanoke Rapids Lake near Roanoke Rapids, N. C., on 14 August by Merrill Lynch. Four were seen on Lake Julian near Asheville, N. C., on 16 November by Robert Ruiz and Roland Sargent.

RED-THROATED LOON: One was found at Wrightsville Beach, N. C., as early as 27 August by Frances Needham.

HORNED GREBE: Charles Bennett recorded 150 at Texas Gulf Sulfur Company's settling pond near Aurora in Beaufort County, N. C., on 22 November.

GREATER SHEARWATER: One was sighted at Kill Devil Hills, N. C., on 25 October by Carl Carlson.

SOOTY SHEARWATER: Three of this species were clearly identified among 10 shearwaters seen close to shore at Kill Devil Hills during the period 23 to 25 October, Carl Carlson.

AUDUBON'S SHEARWATER: A small shearwater believed to be an Audubon's was sighted over Bogue Sound near Atlantic Beach, N. C., on 3 October by John Fussell.

BROWN PELICAN: One was an unexpected visitor at Lake Wylie near Charlotte, N. C., on 19 June, Mrs. William Cobey.

DOUBLE-CRESTED CORMORANT: Two on 29 August and four on 8 October were uncommon visitors at Roanoke Rapids Lake, Merrill Lynch. Fall occurrences of at least five cormorants were also recorded on inland lakes in the vicinity of Raleigh during the period 2 October through 13 November by several observers.

GREAT BLUE HERON: Charles Bennett regularly found 12 or more at the Texas Gulf Sulfur settling pond near Aurora, N. C., during September and October, with an unusually large aggregation of 21 recorded there on 5 October.

LITTLE BLUE HERON: A locally uncommon flock of 10 was noted on 5 August at McKinney Lake Fish Hatchery in Richmond County, N. C., by Jay Carter.

CATTLE EGRET: Two were seen in western North Carolina near Old Fort on 23 and 25 October by Robert Ruiz and the John Hall family

COMMON EGRET: Two were seen on 20 November and six on 25 November inland near Halifax, N. C., by Merrill Lynch.

SNOWY EGRET: An inland wanderer was seen at Raleigh on 22 August by Harry and Edmund LeGrand.

LOUISIANA HERON: One found on 29 August at Roanoke Rapids Lake by Harry LeGrand, Edmund LeGrand, and Merrill Lynch was the first local record.

WOOD IBIS: Eleven were seen near Calabash, in Brunswick County, N. C., on 27 July by Sebastian C. Sommer. Inland, one was an unexpected visitor at Rembut's Pond near Sumter, S. C., on 23 August, Evelyn Dabbs.

GLOSSY IBIS: An individual displaced inland by hurricane Ginger was found at Lake Wheeler near Raleigh on 2 October by Harry and Edmund LeGrand.

WHITE IBIS: An adult wanderer was found inland as far as Winston-Salem, N. C., on 5 August by Wayne Irvin, fide Ramona Snavely.

WHISTLING SWAN: Uncommon occurrences were reported from the South Carolina coast where three individuals were seen at Huntington Beach State Park on 14 November by Frederick Probst and the arrival of a flock of 30 was noted on 9 November at Doe Hall Plantation near McClellanville by Jay Shuler.

BLUE GOOSE: An immature Blue Goose, together with an adult Snow Goose, arrived at a pond in Forsyth County, N. C., near Winston-Salem on 8 October and remained there for about two and a half weeks, Charles Frost, Robert Witherington and Ramona Snavely.

PINTAIL: A flight of 35 was seen inland over the Cape Fear River in the vicinity of

Raven Rock State Park, Harnett County, N. C. on 2 October by Howard Hodges.

COMMON TEAL: A drake was carefully identified in a raft of Green-winged Teal at Pea Island Refuge on 25 November by Joseph A. Grom.

GREEN-WINGED TEAL: Two were very early at Raleigh on 13 August, Harry LeGrand.

BLUE-WINGED TEAL: A flock of 19 were swimming in a rain puddle at Finley Golf Course, Chapel Hill, N. C., on 19 October, James Pullman.

EUROPEAN WIDGEON: A drake was present from late October through mid-November at Pea Island, as reported by Refuge Manager N. R. Williamson.

AMERICAN WIDGEON: Two were early at Roanoke Rapids Lake on 12 September, Merrill Lynch.

SHOVELER: One was found as early as 7 September at Bodie Island, N. C., by Dennis L. Carter.

REDHEAD: Seven were unusual visitors at Lake Julian near Asheville, N. C., on 10 November, Roland Sargent.

SCOTERS: An estimated 9,000 to 10,000 scoters were seen off the beaches at Pea Island on 30 October by David Hughes, Gary Williamson, and Jay Robbins. The observed flocks were predominantly Surf Scoters, but all three species were present, including at least 50 to 60 White-winged Scoters.

COMMON MERGANSER: A lone female was seen at Lake Benson near Raleigh on 20 November by Robert Hader.

ROUGH-LEGGED HAWK: One was seen at Pea Island Refuge on 10 and 11 November by N. R. Williamson. Another, in dark plumage, was observed near Bowman, Orangeburg County, S. C., on 29 October by Dennis Forsythe.

BALD EAGLE: An adult was sighted inland near Raleigh on 19 August by Robert Hader.

MARSH HAWK: One on 15 August near Chapel Hill was unusually early for that locality, James Pullman.

OSPREY: During a 2-hour period on 4 October, Jay Carter observed 90 Ospreys passing southward over Wrightsville Beach, N. C.

PEREGRINE FALCON: Sightings totaling at least 18 individuals were reported by observers at nine coastal locations from Nags Head, N. C., to Cape Romain Refuge, S.C., during the period 21 September through 24 October. Inland at Raleigh, single birds were seen on 18 September by Mike Browne and on 2 October by Harry and Edmund LeGrand.

SPARROW HAWK: No less than 99 (an average of 5 per mile) were seen perched on wires along the road between Oregon Inlet and Salvo, N. C., on 27 September by David Christie and party.

VIRGINIA RAIL: A migrant was found out of normal habitat in dry woods at Umstead State Park near Raleigh on 17 September by Edmund LeGrand.

BLACK RAIL: Two were seen at a marsh creek on Bodie Island, N. C., 25 September by Kitty Kosh and Lou Overman, and one was flushed near the same spot the following day by Geraldine Cox and Elizabeth Ball.

COMMON GALLINULE: Two were uncommon visitors at Lake Wheeler near Raleigh on 2 October, Jeanne and Ray Halsey.

PIPING PLOVER: On 25 September an unusually large concentration of at least 100 Piping Plovers was noted at Oregon Inlet, N. C., by Elizabeth and Robert Teulings.

AMERICAN GOLDEN PLOVER: Five were carefully studied at Oregon Inlet on 10 October by Gilbert Grant, and a single bird was seen at Nags Head on 24 November by Joseph Grom. Inland, one was a rare visitor at Raleigh on 11 September, reported by Robert Hader.

BLACK-BELLIED PLOVER: At least 500 were seen at Oregon Inlet on 3 October, by Mike Browne.

WHIMBREL: Two late migrants were found at Bird Shoal off Morehead City, N. C., on 31 October by John Fussell.

GREATER YELLOWLEGS: A large and unusual influx of 80 was recorded at Lake

Raleigh near Raleigh on 12 September by Chris Marsh. Ten, identified by call, were found near Halifax, N. C., on the late date of 25 November by Merrill Lynch.

PECTORAL SANDPIPER: A migrant was found lingering at Raleigh as late as 22 November by Harry and Edmund LeGrand.

WHITE-RUMPED SANDPIPER: One was seen at Greenview Pond near Raleigh 18 September by Mike Browne.

LEAST SANDPIPER: A late individual was seen at Raleigh on 16 and 22 November by Harry and Edmund LeGrand.

DUNLIN: A single bird was recorded at Raleigh on 23 October by Robert Hader.

STILT SANDPIPER: Fall migrants were quite common in the Bodie-Pea Island area from late August through September, with a peak count of 50 at Pea Island reported by Robert Ake on 21 August. A late lingerer was seen at Cape Hatteras lighthouse on 20 November by Mitchell Byrd.

WESTERN SANDPIPER: Three were observed at Lake Raleigh, Wake County, N. C., on 5 and 9 September by Harry LeGrand; two were seen there on 12 September by Chris Marsh.

BUFF-BREASTED SANDPIPER: Several field parties enjoyed close-up observations of as many as seven birds feeding in mud flats adjacent to the north pond of Pea Island Refuge during the weekend of 25 and 26 September. An inland sighting was also recorded at Raleigh where a single bird was seen at Greenview Farm on 2 September by Harry LeGrand, Edmund LeGrand, and John Fussell.

HUDSONIAN GODWIT: James Parnell and other observers found two at Pea Island north pond on 25 and 26 September. Elsewhere, John Fussell saw one at Bird Shoal off Morehead City, N. C., on 3 October and later sighted at least two there on 27 November.

AMERICAN AVOCET: On 28 August, two were seen at Bird Shoal off Morehead City, N. C., by John Fussell; and 25 were found at Hog Island near Mt. Pleasant, S. C., on the same date by Dennis Forsythe. An uncommonly large flock of 150 was seen by CBC observers at the north pond of Pea Island Refuge on 25 September. On 8 November an individual was found at Carolina Beach, N. C., by James Pullman.

NORTHERN PHALAROPE: A single bird in winter plumage was an unexpected visitor at Lake Wheeler near Raleigh, 2 October, in the wake of hurricane Ginger, Harry and Edmund LeGrand.

POMARINE JAEGER: One was sighted close to shore at Kill Devil Hills, N. C., on 25 October by Carl Carlson; another was also seen by the same observer at Oregon Inlet on that date.

PARASITIC JAEGER: One was seen in the company of five unidentified jaegers off Coquina Beach on Bodie Island, N. C., 25 October by Harold Wierenga and party. The same observers also saw seven jaegers, two clearly identifiable as Parasitic, off the beach near Oregon Inlet the following day. Three individuals of this species were seen well at Pea Island on 30 October by Sebastian Patti, Harry LeGrand, and Edmund LeGrand.

GREAT BLACK-BACKED GULL: A late summer count of 80 was recorded at Hatteras Inlet on 7 September by Dennis L. Carter.

HERRING GULL: On 2 October following passage of hurricane Ginger, a mixed flock of adults and immatures was seen at Lake Wheeler near Raleigh by Harry and Edmund LeGrand. On that day 11 were also seen at Roanoke Rapids Lake in northern Halifax County, N. C., by Merrill Lynch.

LAUGHING GULL: A flock of 26 were uncommon visitors at Roanoke Rapids Lake on 10 October, Merrill Lynch.

BLACK-LEGGED KITTIWAKE: An immature bird was sighted just off the beach at Kill Devil Hills, N. C., on 23 October by Carl Carlson.

FORSTER'S TERN: About 30 were observed by Harry and Edmund LeGrand at Lake Wheeler near Raleigh on 2 October following passage of hurricane Ginger.

COMMON TERN: Simultaneous occurrences were recorded at three inland North

Carolina locations, 2 October, in the wake of hurricane Ginger, with counts of 12 at Raleigh by Jeanne and Ray Halsey, 21 at Roanoke Rapids by Merrill Lynch, and at least 20 at Chapel Hill by James Pullman.

SOOTY TERN: One was recorded at Bogue Inlet near Morehead City, N. C., on 28 August by John Fussell.

ROYAL TERN: An individual, very likely swept inland by hurricane Ginger, was sighted at Lake Gresham near Raleigh on 2 October by Jeanne and Ray Halsey, the first record for Wake County. Another (or perhaps the same bird) was seen by Robert Small the following day at Lake Johnson, as reported by Robert Hader.

SANDWICH TERN: Two late-lingering individuals were seen in the Morehead City, N. C., area on 26 November by John Fussell.

CASPIAN TERN: Fall migrants were seen regularly in small numbers at Roanoke Rapids Lake from late August through early October by Merrill Lynch. Peak counts there were seven on 29 August and nine on 1 October.

BLACK SKIMMER: At least 4,000 were gathered on the sand flats at Oregon Inlet on 3 October, as reported by M. F. Majka; at least 2,000 were seen at Bird Shoal near Morehead City on 27 November by John Fussell.

GROUND DOVE: Two were seen north of their usual range on 25 September and 3 October at Fort Macon State Park near Atlantic Beach, N. C., by Ray Winstead, John Fussell, and others.

YELLOW-BILLED CUCKOO: A late migrant was seen at Sneads Ferry in Onslow County, N. C., on 7 November by Gilbert Grant.

BLACK-BILLED CUCKOO: One was seen at North Wilkesboro, N. C., on 20 September by Wendell Smith, and one was found dead at Morehead City, N. C. on 3 October by C. J. Spears, verified by John Fussell.

COMMON NIGHTHAWK: A flight of a dozen early migrants was seen moving southward over the Blue Ridge Mountains near West Jefferson, N. C., on 17 August by Mildred F. Hartmann; and a very late migrant was observed on the coast at Pea Island, N. C., on 30 October by Sebastian Patti, Harry LeGrand, and Edmund LeGrand.

RUBY-THROATED HUMMINGBIRD: One was present regularly at a feeder in Morehead City as late as 27 November, fide John Fussell.

YELLOW-BELLIED SAPSUCKER: One was seen at Bodie Island, N. C., as early as 25 September, Elizabeth and Robert Teulings.

WESTERN KINGBIRD: Hal Wierenga and party observed a total of eight on wires along the Ocracoke Island, N. C., highway on 12 October. Elsewhere on the Outer Banks fall migrants were seen with regular frequency by observers in the Bodie-Pea Island area during the period 25 September through 20 November, including three in the vicinity of Bodie Island lighthouse by James Pullman on 11 November. Two were also seen on the coast at Emerald Isle, N. C., on 3 October by John Fussell, and another at Brookgreen Gardens south of Myrtle Beach, S. C., on 6 November by Frederick Probst. Inland, a single bird was seen near Fayetteville, N. C., on 10 November by James Parnell and Jay Carter.

SCISSOR-TAILED FLYCATCHER: An individual described as an immature was present for two days on 5 and 6 August at Pea Island Refuge, N. R. Williamson.

YELLOW-BELLIED FLYCATCHER: One was closely observed and clearly heard singing on 15 September near Raleigh by Edmund LeGrand.

OLIVE-SIDED FLYCATCHER: One was seen just north of Devil's Courthouse on the Blue Ridge Parkway on 5 September by Mike Browne; Wendell Smith sighted another at North Wilkesboro, N. C., on 13 October.

SWALLOWS: Harry and Edmund LeGrand noted an unusual influx at Raleigh on 2 October, apparently related to the passage of hurricane Ginger. The tally included 2 Bank Swallows, 5 Cliff Swallows, and 750 Tree Swallows. In addition, an exceptionally late Tree Swallow was seen there on 26 November by James Pullman.

SHORT-BILLED MARSH WREN: A transient was found at Roanoke Rapids, N.C. on 12 October by Merrill Lynch.

BLUE-GRAY GNATCATCHER: A late fall straggler was seen at Roanoke Rapids, N. C., on 21 November by Merrill Lynch.

CEDAR WAXWING: On 14 July, Ramona Snavely observed two adults feeding four very young fledglings at Salem Lake near Winston-Salem, a rare local breeding record.

WARBLING VIREO: One was sighted on 15 September at North Wilkesboro, N. C., by Wendell Smith, a very uncommon fall record for the Carolinas.

PHILADELPHIA VIREO: Gilbert Grant observed single birds on the coast at Duck, N.C., on 10 and 26 September; and one was seen at Bodie Island on 25 September by John Wright and Harry LeGrand.

PROTHONOTARY WARBLER: Eight were among an early coastal movement of passerines observed on 6 August at Duck, N. C., by Gilbert Grant.

SWAINSON'S WARBLER: A specimen was found dead at a television tower near Columbia in Tyrrell County, N.C., on 23 September by Mike Browne; and a migrant was banded by Gilbert Grant at Duck, N.C., on 9 October.

WORM-EATING WARBLER: Two early fall transients were seen near Southern Pines, N. C., on 15 August by Jay Carter.

GOLDEN-WINGED WARBLER: Three were seen at Umstead State Park near Raleigh between 13 and 18 September by Edmund LeGrand, John Wright, and Harry LeGrand; and two were seen at Fort Macon State Park near Atlantic Beach, N. C., on 2 October by John Fussell.

BLUE-WINGED WARBLER: Uncommon fall occurrences were recorded by observers in the eastern area of North Carolina at Roanoke Rapids, Raleigh, Singletary Lake, and Wilmington during the period 19 August through 24 September.

WARBLER HYBRIDS: A well-marked Brewster's Warbler was seen near Asheville, N. C., on 4 May by Joseph Hall, and another was found on 27 September at Winston-Salem by Ramona Snavely. At Raleigh, Edmund LeGrand reported seeing a possible back-cross hybrid that looked like a Golden-winged Warbler except for a yellow Brewster's breast patch below the black throat. This latter sighting occurred at Umstead State Park on 13 September.

ORANGE-CROWNED WARBLER: One was an uncommon fall visitor at Umstead State Park near Raleigh on 15 October, Harry and Edmund LeGrand.

NASHVILLE WARBLER: One was banded at Hillsborough, N.C., on 9 October by Charles Blake.

BLACK-THROATED BLUE WARBLER: Jay Carter reported seeing two at Southern Pines on 4 September, an early fall record for that locality.

CHESTNUT-SIDED WARBLER: An early migrant was banded on 25 August by Charles Blake at Hillsborough, N. C.

LOUISIANA WATERTHRUSH: One was seen at Roanoke Rapids, N. C., as late as 2 October, Merrill Lynch.

CONNECTICUT WARBLER: Elizabeth Teulings banded a transient at Chapel Hill on 9 October. At Raleigh, individuals were found dead at a television tower on 23 September and 20 October by Mike Browne.

HOODED WARBLER: Charles Blake banded a late-lingering individual at Hillsborough, N. C., on 29 October.

WILSON'S WARBLER: One was recorded as a scarce transient on the coast at Bodie Island 25 September by John Fussell, Sebastian Patti, Harry LeGrand, and Edmund LeGrand.

CANADA WARBLER: An early fall visitor was banded at Hillsborough, N. C., on 23 August by Charles Blake.

BOBOLINK: An estimated 1,500 to 2,000 were seen moving southward over Halifax, N.C., early on the morning of 18 September by Merrill Lynch and Bill Collier.

SCARLET TANAGER: A late individual was noted at Raleigh on 23 October by Gail Whitehurst.

SUMMER TANAGER: On 6 August, eight were observed by Gilbert Grant among an early movement of migrants at Duck, N. C., on Currituck Banks.

(Continued on Page 28)

Carolina Bird Club
INC.

Founded 6 March 1937 **Incorporated 8 August 1949**

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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Birds

The Chat

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OUR COVER—The Saw-whet Owl was photographed by William E. Savell, a bird bander from Linwood, N. J. Inside you will find an important paper by Mark Simpson listing many additional North Carolina records for the elusive Saw-whet Owl.

THE SAW-WHET OWL POPULATION OF NORTH CAROLINA'S SOUTHERN GREAT BALSAM MOUNTAINS

MARCUS B. SIMPSON JR.

Pearson, Brimley, and Brimley (1942) regarded the Saw-whet Owl *(Aegolius acadicus)* as a "casual winter visitor" to North Carolina, with no evidence that the bird might be present in the state during the breeding season. Furthermore, the American Ornithologists' Union (1957) gave the breeding range of the species as "south ... to central Ohio, West Virginia, and Maryland." Nevertheless, Stupka's (1946) spring and summer records of the owl in the Great Smoky Mountains marked the beginning of a growing body of evidence, reviewed by Simpson (1968), which documents the occurrence of the Saw-whet Owl as a spring and summer resident in regions of suitable habitat throughout the major mountain ranges of western North Carolina and adjacent eastern Tennessee. Within this high mountain country, the bird has been associated with Canadian zone forests of red spruce *(Picea rubens)* and Fraser fir *(Abies fraseri);* and summer records of the owl have been confined, therefore, to the Great Smoky, Plott Balsam, Great Balsam, Roan, and Black Mountains. In spite of a fairly large number of individual records, there has been no effort to study the population structure of the Saw-whet Owl in any of these ranges; and data pertaining to absolute numbers and density are, therefore, unavailable. In light of this situation, a summary of extensive field work from the Great Balsam Mountains and Pisgah Ridge will provide valuable information concerning the status of the Saw-whet Owl in the southern Appalachians.

STUDY AREA

The southern portion of the Great Balsam Mountains and adjacent Pisgah Ridge provide an excellent location for studies of the Saw-whet Owl. These two transverse ranges lie along the southern edge of Haywood County, N.C., with the Great Balsams forming the boundary between Haywood and Jackson Counties and Pisgah Ridge forming the border between Haywood and Transylvania Counties. Canadian zone forests begin on Lone Bald, just east of Locust Gap in the Great Balsams, and extend for 13 miles southeastward, past Tanasee Bald and into the Pisgah Ridge area to their terminus at Fork River Bald (see map, Figure 1). In spite of heavy logging operations and repeated fires, these spruce-fir forests are fairly dense along the main ridge, although no precise data concerning total acreage are available. The Blue Ridge Parkway provides convenient access to the entire range; and the route follows close to the crest of the mountains, thereby giving panoramic views of practically all regions of Canadian zone forest within the area. By careful utilization of the Parkway and adjoining trails, it is possible in a 3-hour period to census approximately 90% of the high altitude coniferous forests in these two ranges.

METHODS OF OBSERVATION

The majority of my field work in this region spans the period from spring of 1968 through spring of 1971, during which time I conducted 29 censuses totaling 145 hours of field work. Initially, the censuses were conducted between the hours of 8:30 PM and 5:30 AM by stopping every 0.2 mile along the Parkway, whistling an imitation of the owl's calls, and listening for 3 to 5 minutes at each site. Once the locations of calling stations became apparent, stops were usually made at these sites and in regions with extensive spruce-fir forests. Of these 29 censuses, 4 were conducted in March, 4 in April,

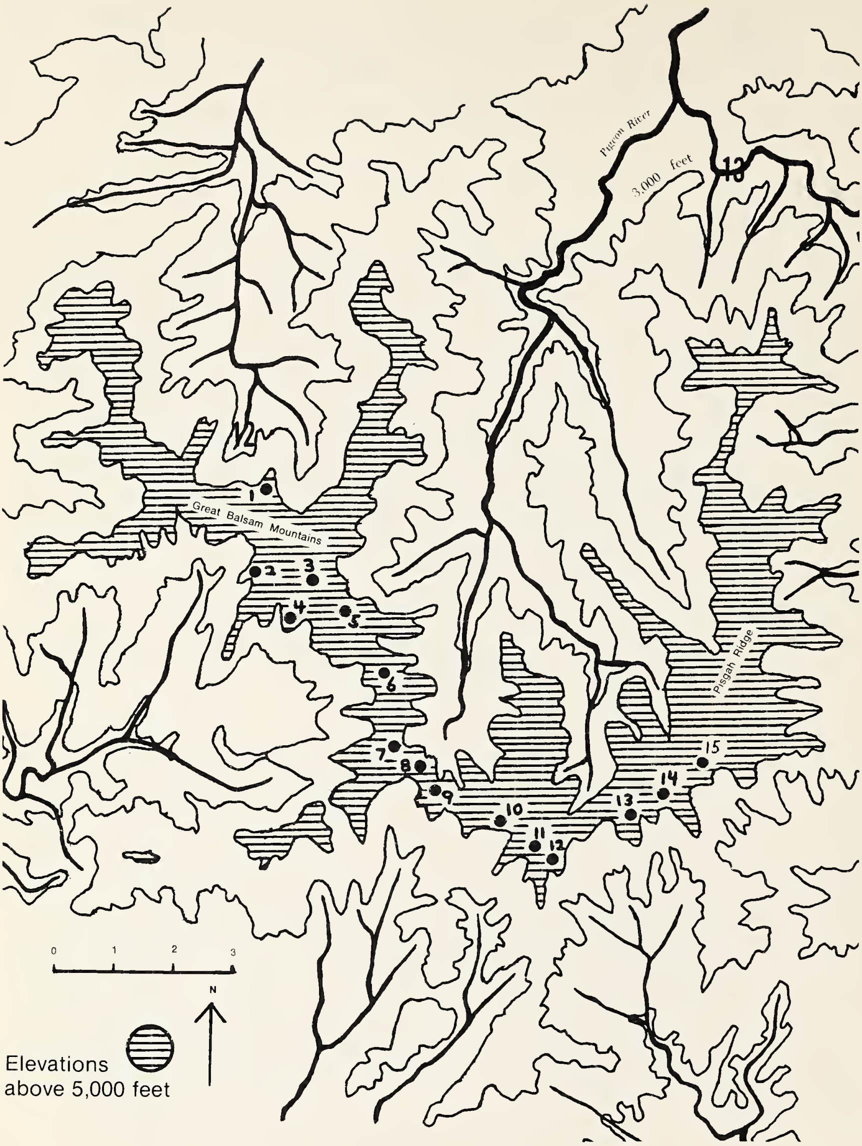
Pigeon River
3,000 feet
13
1
Great Balsam Mountains
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Pisgah Ridge
0
1
2
3
N
Elevations above 5,000 feet

Figure 1. Saw-whet Owls have been found at 15 localities in the Great Balsam Mountains and Pisgah Ridge. Canadian zone spruce-fir forests begin on Lone Bald (near Site 1) and extend for 13 miles southeastward past Tanasee Bald (Site 12) into Pisgah Ridge, terminating at Fork River Bald (Site 15).

6 in May, 7 in June, 3 in July, none in August, 2 in September, 2 in October, and 1 in November. In addition to the censuses, I have spent some 100 nights listening for Saw-whet Owls in this area during the period from 1960 to 1971, so that a total of approximately 400 hours of field work is represented in this study. Additional records of the owl have been reported from the study region by Richard H. Peake (1965 and pers. com.), Charles F. Hutchinson (pers. com.), and Don R. McLeod (pers. com.).

With the exception of a few sight records, all observations are based on the call notes of the Saw-whet Owl. The most common "song" consists of a series of resonant, bell-like "cooing" notes repeated at the rate of 1 or 2 per second and often lasting for several hours without a break. Unfortunately, it is difficult and frequently impossible to hear the calling of the species if there is any wind movement; and many nights of field work subsequently produce no records. On the other hand, ideal weather conditions may produce excellent results, as on the night of 31 May 1969, when seven Saw-whet Owls were calling in the census area. On nights when the wind is calm, rapid, repeated surveys of the range provide a very accurate figure for the total number of owls actively calling in the area.

OBSERVATIONS

SITE 1 - SPRUCE RIDGE - Haywood County - 5,600 feet

The calling area is along the NW slope of the ridge just E of Lone Bald Overlook. Saw-whet Owls called from this site at 9:50 PM on 7 June 1969 and at 9:40 PM on 23 May 1970.

SITE 2 - RICHLAND BALSAM - Jackson County - 5,120 feet

The calling area is on an unnamed ridge running SSW from Richland Balsam and approximately 0.4 mile E of Lone Bald Overlook. Saw-whet Owls were heard here at 8:45 PM on 12 April 1968 (Simpson, 1968) and at 10 PM on 7 June 1969.

SITE 3 - RICHLAND BALSAM - Jackson and Haywood Counties - 6,200 feet

The calling area is on the S slope of Richland Balsam along the Nature Trail from the Jackson-Haywood Overlook to the peak. Saw-whet Owls were reported here by Peake (1965) on 3 May 1965, and on 10 July 1965 he observed a juvenile Saw-whet at this spot. Peake (pers. com.) also found the species on 16 August 1965, 22 April 1966, and 20-21 July 1968. I heard the species calling here at 8 PM on 12 April 1968 (Simpson, 1968) and at 9:55 PM on 23 May 1970. On the night of 31 May 1969 a single bird was calling along the trail about 250 yards from the parking lot, and I was able to watch it at close range for 10 minutes in a spotlight.

SITE 4 - CHESTNUT RIDGE - Jackson County - 5,320 feet

This calling area is located in a small stand of spruce on the S slope of Richland Balsam below the Cowee Mountain Overlook. I heard Saw-whet Owls calling here at 11 PM on 11 April 1968 (Simpson, 1968), 11 PM on 31 May 1969, 8 PM on 13 June 1969, 11:30 PM on 14 May 1970, and at 10:10 PM on 23 May 1970.

SITE 5 - BIG BEARTRAIL RIDGE - Haywood County - 5,800 feet

This site is on the NE slope of Reinhart Knob about 100 feet NE of the Parkway road cut through the ridge. I heard Saw-whet Owls here at 11 PM on 10 May 1968 (Simpson, 1968), 10:20 PM on 7 June 1969, at 10 PM on 13 June 1969, and at 1:30 AM on 11 April 1971.

SITE 6 - BEARTRAP GAP - Jackson and Haywood Counties - 5,680 feet

The calling area is on an unnamed peak NW of the Beartrap Gap Overlook. My only record of the owl from this site is of a single bird calling at 10:35 PM on 31 May 1969.

SITE 7 - ROUGH BUTT BALD - Haywood County - 5,400 feet

The calling area is on the N slope, below the Parkway, and approximately 0.3 mile NE of the peak. My only record is of a single bird calling at 10:10 PM on 31 May 1969.

SITE 8 - HAYWOOD GAP - Haywood County - 5,080 feet

The calling area is near Sweetwater Spring on the N slope of Parker Knob just below the Parkway cut at Haywood Gap. I have heard Saw-whet Owls calling here at 10:20 PM on 11 April 1968 (Simpson, 1968), at 10:05 PM on 31 May 1969, at 10:35 PM on 14 May 1970, at 10:40 PM on 23 May 1970, and at 4:50 AM on 6 June 1970.

SITE 9 - PARKER KNOB - Haywood County - 5,400 feet

This site is on the E slope of the knob just above the Parkway. I noted a single bird calling here on 11 April 1968 (Simpson, 1968).

SITE 10 - MT. HARDY - Jackson County - 5,200 feet

This site is below the Parkway on the SSW slope of Mt. Hardy. I noted a single owl calling here at 11:05 PM on 7 June 1969.

SITE 11 - HERRIN KNOB - Jackson and Haywood Counties - 5,440 feet

This site is along the Parkway in the gap between Herrin Knob and Tanasee Bald adjacent to the headwaters of Bubbling Spring Branch. At 9:30 PM on 11 April 1968, I recorded on tape the calls of a single owl at this site (Simpson, 1968).

SITE 12 - TANASEE BALD - Transylvania County - 5,480 feet

This site is on the NE slope of the peak and approximately 100 yards SW of the Tanasee Bald Overlook. I heard single owls calling here at 9:15 PM on 11 April 1968 (Simpson, 1968), at 9:45 PM on 31 May 1969, and at 1:10 AM on 11 April 1971. In addition, Don R. McLeod (pers. com.) heard Saw-whet Owls calling here on several occasions in June 1959 and June 1963.

SITE 13 - DEVIL'S COURTHOUSE - Transylvania County - 5,650 feet

This site is along the ridge on the N slope of the peak adjacent to the trail from the Parkway. Don R. McLeod (pers. com.) noted Saw-whet Owls calling here in June 1959, and Charles F. Hutchinson (pers. com.) heard the species here on two occasions in June 1965. I noted single birds calling at 10:15 PM on 12 April 1968 (Simpson, 1968), at 9:30 PM on 31 May 1969, at 10 PM on 14 May 1970, and at 4:35 AM on 6 June 1970. On 28 May 1971 several members of the Carolina Bird Club and Georgia Ornithological Society heard two Saw-whet Owls calling simultaneously during the mid-afternoon; and at 11:30 PM on the same night, I heard a single owl calling here just N of the Parkway.

SITE 14 - SILVERMINE BALD - Transylvania County - 5,800 feet

This site is 0.2 mile W of Shuck Ridge just above the Parkway on the S slope of the bald. I heard the owls here at 8:45 PM on 11 April 1968 (Simpson, 1968) and at 9:50 PM on 7 June 1970.

SITE 15 - FORK RIVER BALD - Transylvania County - 5,480 feet

This site is below the Parkway on the SW slope of the bald. My single record here is an owl calling at 9:30 PM on 14 May 1970.

CALLING STATIONS AND POPULATION DENSITY

An examination of the above data from the Great Balsam-Pisgah Ridge area reveals a total of 49 records of the Saw-whet Owl at elevations ranging from 5,050 feet (Site 8) to 6,200 feet (Site 3) and averaging 5,597 feet. These records span the period from 11 April

(1968) to 16 August (1965); but 46 of the 49 records are based on the owls' calling, which encompasses the period from 11 April through 13 June (1969). Of these 46 calling records, 12 are from April (26%), 20 from May (44%), and 14 from June (30%). Since field time was not evenly distributed among the 9 months involved in the study, it is impossible to draw statistically valid conclusions about the calling season of the owl. However, the data do suggest rather strongly that the period of regular, active calling extends from around the first week of April through the middle of June, with vocal activity outside this period being erratic and unpredictable. The maximum number of owls noted on a given night was seven on 31 May 1969, while six were calling on 11 April 1968, and four were heard on the nights of 7 June 1969 and 14 and 23 May 1970.

Savage (1965) was apparently the first to use the term "calling station" to designate localities at which Saw-whet Owls were heard repeatedly. As defined in this paper, a "calling station" is a specific locale where the species has been reported calling on two or more different nights. On this basis, there are a total of nine calling stations in the Great Balsam-Pisgah Ridge area along a 13-mile transect, thus representing a density of one station per 1.44 miles. The validity of these designated stations is apparent in a careful scrutiny of the records, which indicate at least one occasion for each station when owls were simultaneously present in immediately adjacent calling areas on the same night. Interestingly, all nine of the calling stations have been occupied for at least 2 years, a fact suggesting that the owls return to the same site during consecutive breeding seasons. The stations at Spruce Ridge (Site 1), Richland Balsam (Site 2), and Silvermine Bald (Site 14) have been active for 2 years. The calling stations at Chestnut Ridge (Site 4), Big Beartrail Ridge (Site 5), Haywood Gap (Site 8), and Tanasee Bald (Site 12) have been active for 3 years; Richland Balsam (Site 3) has been active for 5 years; and Devil's Courthouse (Site 13) has been active for 6 years. Examining the data from the 4-year period of censuses reveals that eight of the nine stations were active in both 1968 and 1969, while five stations were active in 1970 and three were active in 1971. Since the majority of censuses were conducted in the first two years, this apparent decline in station activity during the 4-year period reflects the amount of time spent in the field during each season and is not indicative of a decrease in the owl population in the region.

Analysis of the above data reveals some interesting conclusions concerning the population density of the Saw-whet Owl in the area. The maximum number of owls noted on a given census (31 May 1969) was seven, for a value of one bird per 1.86 miles. The maximum number of calling stations active in a given year (1968 and 1969) was eight, for a value of one station per 1.63 miles. The total number of calling stations in the range is nine, for a value of one station per 1.44 miles. A careful scrutiny of the records from a comparable region in the Great Smoky Mountains reveals a remarkably similar figure for station density. Based on the observations of Stupka (1946, 1963), Savage (1965 and pers. com.), Simpson (1968), and James Campbell (pers. com.), there are five calling stations along the main crest of the Smokies on the 7-mile transect along the road from Newfound Gap to Clingman's Dome, for a station density of one per 1.40 miles. Although no values are available from the Smokies for owls per night or active calling stations per year, the value for station density is quite similar to that of one per 1.44 miles in the Great Balsams. This suggests that densities of the species may be relatively uniform in areas of comparable habitat in the southern Appalachians, although it is not known whether these stations are indicative of the locations of breeding pairs or individual owls.

The Saw-whet Owl is clearly the most abundant owl species in the spruce-fir zone of the southern Great Balsam Mountains. In the course of my field work I have never seen or heard any other owls in this area, although Barred Owls *(Strix varia)* may be heard calling from hardwoods about 1,000 feet lower in elevation. Stupka (1963) regards both the Barred and the Great Horned Owl *(Bubo virginianus)* as uncommon permanent residents of the Great Smoky Mountains, and he considers the fairly common Screech Owl *(Otus asio)* to be very rare or absent in the spruce-fir forests. Although the Barn Owl

(Tyto alba) is found occasionally in the vicinity of the Great Smokies and Great Balsams, I am not aware of any records from the Canadian zone.

In the past, the Saw-whet Owl has been regarded as a rare to uncommon species in the spruce-fir forests of the mountain regions. This impression has apparently been due to the random nature of observations, the lack of systematic census work, and the necessity for totally calm wind conditions during periods of field work. The present data, especially the census of 31 May 1969, indicate that the owl is actually fairly common in regions of suitable habitat, in fact the most abundant owl in the Canadian zone forests of the southern Great Balsam Mountains. It seems likely that systematic, repeated censuses in other ranges might yield a similar index of abundance in suitable habitat outside the Great Balsams.

HABITAT PREFERENCE

The aerial photograph (Figure 2) of Tanasee Bald and Devil's Courthouse is typical of the habitat found at each of the nine calling stations in the Great Balsam Mountains and Pisgah Ridge. It is apparent from this photograph that the spruce-fir forests are fairly limited in extent and generally confined to scattered groves along the crest of the ridge. In the southern Great Balsam Mountains, there are two main sites where the Canadian zone community occurs in a vast, relatively unbroken canopy: Reinhart Knob and the SW slope of Richland Balsam. Saw-whet Owls have never been reported from either of these locations, in spite of intensive and repeated searches. Although the 49 records contained in the present study are from areas where spruce-fir forests are present, a careful examination of aerial photographs of the Great Balsam Mountains indicates that this biome often constitutes only a portion of the habitat where the owl occurs. Seventeen of the 49 records are from areas where hardwoods comprise over 90% of the forest canopy, with conifers occurring only as scattered, solitary trees. Furthermore, eight of the nine calling stations and all of the other single records are from localities where the spruce-fir forests are either limited in extent, disrupted by fires or logging, or extensively infiltrated with species typical of the heath or northern hardwood communities. Nevertheless, virtually every article dealing with the Saw-whet Owl in the southern Appalachians has left the impression that the species is strictly confined during the breeding season to the Canadian zone biome.

Although no data are available from the southern Appalachians concerning the home range of the owl, Thomas H. Nicholls (pers. com.) has utilized biotelemetric tracking techniques to measure the movements of the species at the University of Minnesota's Cedar Creek Automatic Radio-tracking Station. Nicholls informs me that three Saw-whet Owls were followed for 20 days each with this technique, and their average home range was approximately 350 acres. If one assumes that the Saw-whet Owl occupies a home range of comparable size in the Great Balsam area, then it seems apparent that the bird must utilize a considerable acreage of hardwood forests, even though spruce-fir associations must be present in the immediate vicinity. Accurate documentation of habitat selection would require the use of biotelemetry in the study area, but inspection of the aerial photographs substantiates the general impression that one gets in the field, namely that the bird occurs predominantly in the transition zone between the spruce-fir community and hardwood forests.

Although there appears to be no information in the literature concerning the relationship between the calling area and the foraging area of the owl, it seems possible that the occurrence of the species in this transitional zone, or edge community, is related to the relative abundance of food in the area. Peter Weigel (pers. com.) has conducted extensive studies of the mammal populations of the spruce-fir, northern hardwood, and transitional zone communities of the Roan Mountain area, and his studies indicate a statistically significant difference in the density of species and individuals among the three communities. The greatest variety of species and the maximum number of individuals occur in the edge between the spruce-fir and northern hardwood communities. Thus the rodents and other small mammals that comprise one of the major

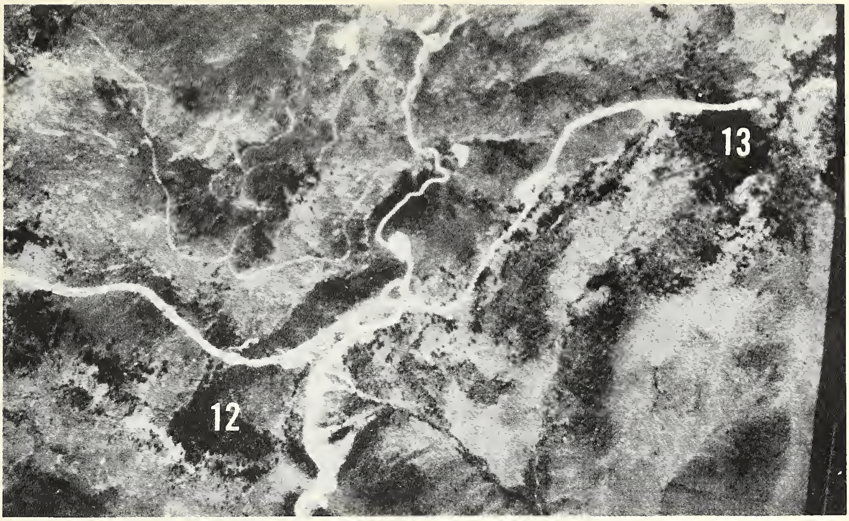

Figure 2. Aerial photograph shows Saw-whet Owl calling stations at Tanasee Bald (Site 12) and Devil's Courthouse (Site 13). The east-west highway is the Blue Ridge Parkway, and the one running north-south is NC 215. Note how the dark patches of spruce-fir forest contrast with the surrounding hardwoods. This is typical habitat for all nine calling stations.

sources of food for the Saw-whet Owl attain their maximum density in the areas where the two communities merge. It may be hypothesized, therefore, that the presence of the owl in these mixed communities is in part a reflection of the relative abundance of food in the locality.

Several authors, including Hall (1966), have suggested that the recent increase in records of the Saw-whet Owl in the southern Appalachians indicates range expansion by the species. In a previous paper (Simpson, 1968), I suggested that these records are not sufficient evidence to establish range expansion but rather reflect three trends in the area: the increased accessibility of the high country due to the creation of new roads, the growing popular interest in birds, and intentional searching for the species by ornithologists. However, if the species does prefer edge or transitional communities, then there may have been an increase in the numbers of the bird due to the disruption of the forests by fires, logging, highways, and insect pests. In this regard, it is interesting that in the Black Mountains the owl was not reported until 1949, in spite of extensive studies of the range by Brewster (1886), Cairns (1887, 1889, 1891, 1894), and Burleigh (1941). Nevertheless, the owl may have been overlooked in this area until modern times; and any evidence offered either to support or refute the concept of range expansion remains highly circumstantial.

From a geographical standpoint, the calling station at Tanasee Bald (Site 12) is of considerable significance. Although small scattered groves of red spruce occur farther south into the mountains of northern Georgia, Ramseur (1960), Stupka (1964), and Simpson (1968) have pointed out that the true Canadian zone spruce-fir biome reaches its southern limit in the eastern United States at Tanasee Bald. If the Saw-whet Owl requires the presence of this plant community during the breeding season, then Tanasee Bald represents the southernmost point in the eastern United States where this species should occur during the spring and summer months. As pointed out in my previous paper (Simpson, 1968), however, additional field work is required to determine whether the owl is strictly limited to these spruce-fir communities.

EVIDENCE OF BREEDING

One of the major controversies over the status of the Saw-whet Owl in the southern Appalachians centers around the question of whether the extensive summer records indicate a breeding population. In spite of repeated, systematic searches in the Great Smokies, Great Balsams, and Black Mountains, no nests or eggs have ever been reported. However, there are two records of juvenile owls from North Carolina which provide strong evidence that the species does nest in the state. A review of these two reports is in order.

On 10 July 1965 Peake (1965) reported his sighting of a single Saw-whet Owl in juvenile plumage at Richland Balsam in the Great Balsam Mountains and suggested that this was the first record to substantiate the breeding of the species south of West Virginia. Subsequently, on 2 September 1965, a juvenile Saw-whet Owl was captured in the mist nets at Mt. Mitchell State Park in the Black Mountains. This bird was banded with USF&WS No. 544-05701 by Brad Hawkins and photographed by Connely Moffett. Hawkins (pers. com.) felt that the record was strong evidence of breeding in the Mt. Mitchell area. However, a number of ornithologists have contended that these two records may represent early migrants; and the validity of using the records as breeding evidence has been questioned on this basis.

An examination of the available data on migration patterns of the Saw-whet Owl indicates that it is extremely unlikely that the juvenile owls found by Peake and Hawkins were migrants. Davis (1966) reported on the extensive southward invasion of the species into the eastern United States during the fall of 1965, and his summary indicated that the overwhelming bulk of the population arrived between 3 October and 10 November with the peak of movement occurring between 14 and 18 October. Furthermore, the earliest record was from Monomoy, Massachusetts, on 8 September, and only a few scattered individuals were noted elsewhere from that date until the last week of September. Mueller and Berger (1967) reported on a study of Saw-whet Owl migration at Cedar Grove Ornithological Station in Wisconsin from 1956 through 1964. They noted that the bulk of the records centered around 23 October, with 65% of the sightings occurring in a 2-week period centered on that date. Furthermore, Mueller (pers. com.) informs me that the species was never recorded in the area prior to the last week in September and that only one of the 213 captured owls had even a minute trace of the distinctive juvenile plumage. In North Carolina, the occurrence in spruce-fir forests of these two juvenile owls on 10 July and 2 September strongly suggests, therefore, that the species does breed in the mountain regions of western North Carolina. Ultimate proof, however, must rest upon the eventual discovery of a nest containing eggs or flightless young.

WINTER STATUS AT HIGH ELEVATIONS UNKNOWN

Savage (1965) and Peake (1965) have suggested that the Saw-whet Owl undergoes a "vertical migration" in the southern Appalachians, with the birds wintering in the valleys and moving up the slopes to the higher elevations in late March or early April for breeding. I have no records to substantiate or refute this concept, aside from the fact that the bird has not been recorded in the study area except during the period of April through August. Although Savage (1965), Peake (1965), and Simpson (1968) have summarized the evidence to support vertical migration, the extent to which this occurs and the extent of overwintering in the high elevations remain unknown.

SUMMARY

An 8-year study of the Saw-whet Owl in the southern Great Balsam Mountains reveals a total of 49 records of the species, with the calling season occurring during the period of early April through mid-June. A total of nine calling stations are present in the range along a 13-mile transect, and comparison with a comparable area in the Great Smoky Mountains indicates that densities of the species may be quite uniform throughout regions of suitable habitat in the southern Appalachians. The data indicate that the bird is actually fairly common in the proper habitat, and it is clearly the most abundant owl in the spruce-fir community. The owl shows a preference for mixed communities of conifer and hardwood and occurs most regularly in the transition zone or edge between the spruce-fir and hardwood forests, where the increased availability of small mammals may account for its presence. The questions of range expansion and vertical migration remain unsettled; but two documented occurrences of juvenile Saw-whet Owls in the southern Appalachians, both records coming at least a month prior to the earliest known migratory movement of the species, give strong evidence in support of a breeding population.

ACKNOWLEDGMENTS

I am indebted to R. H. Peake, C. F. Hutchinson, D. R. McLeod, and Tom Savage for permission to examine their records from the range; to Tom Nicholls and Peter Weigel for permission to quote from their research; to Brad Hawkins for permission to publish the banding record from Mt. Mitchell; and to H. C. Mueller for assistance in the preparation of the paper.

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P. O. Box 167, Statesville, N. C., 21 June 1971

THE PLIGHT OF WOOD DUCKS IN THE CAROLINAS

PAUL A. STEWART

There are few success stories in the annals of American wildlife conservation to match that of the Wood Duck *(Aix sponsa)*. From near extinction in the early years of the twentieth century as a result of earlier habitat destruction and unrestricted shooting, the American population of Wood Ducks steadily increased so that a period of inviolate protection starting in 1918 was ended by an open hunting season starting in 1941. Under federal regulations Wood Ducks have continued to be hunted in some states within their range each year since 1941, and they have actually become important game birds in several states, particularly in the Carolinas.

Materialistic as we humans are, it just might be possible that Wood Ducks were brought back from near extinction only because they held possibilities as game birds, for most help they receive comes left-handedly from hunters. However, lest the hunters should take an unearned bow it must be recalled that, with little or no artifical help, Pileated Woodpeckers *(Dryocopus pileatus)* also returned at about the same time to reoccupy remnants of their earlier breeding habitats deserted with the clearing of the primeval forest. Clearly, help would have been to no avail if Wood Ducks had not been adaptable enough to accept the help along with its accompaniments of civilization, and the success of Wood Ducks was most importantly a result of their adaptability.

NEST BOX CONSTRUCTION AND PLACEMENT

Wood Ducks are adaptable only within certain limits, and there are some features of their habitat requirements which they refuse to compromise. For example, they must have elevated cavities for nesting. Tree cavities furnish their natural nesting places, but with clearing of the forest suitable cavities became greatly reduced in numbers; thus the need for artifical nesting facilities was developed. A wooden box 24 inches high with a floor 10 inches square is suitable for their use. There is an entrance hole 4 inches in diameter with its bottom about 16 inches above the floor of the box. A ladder of hardware cloth is attached to the inside of the front of the box for use of the ducklings in escaping from the box, and the roof is made removable to permit periodic inspections of the contents of the box. About 4 inches of sawdust is placed on the floor of the box for nesting material. Only down from her breast is added by the female (Figure 1).

The boxes are mounted on trees near rivers or lakes or on posts extending above the high water level of ponds (Figure 2). When nest cavities are scarce, Wood Ducks nest at surprisingly great distances from water, but many ducklings are then lost in their movement to water. In Iowa, Leopold (1951) reported 61 of 189 Wood Duck ducklings lost in moving about one city block from their nests to water. The boxes should be firmly attached to their supports, but tree-mounted boxes should be attached in such a way that the bolts or nails can be removed from the trees when use of the boxes is discontinued, and the removal of the nails or bolts should be effected at that time. This is desirable for preventing possible damage to equipment when the trees are later harvested and processed.

Because female Wood Ducks return in successive years to cavities where they have successfully nested and because the young females tend to return to nest at or near their hatching places, a person once successful in attracting Wood Ducks to boxes has an improved probability for having nesting birds in subsequent years after the first. However, mortality is particularly high during the first year of the birds' lives, and it is necessary to have about 34 ducklings to leave the nests to assure that one young female will be alive to return to the locality the next year. The probability of an adult female returning a second year is much higher than for the newly hatched young, or about one

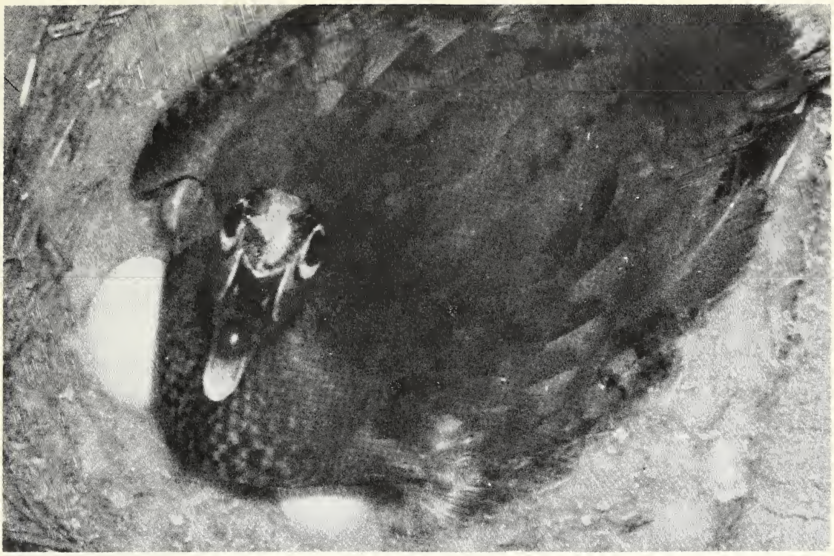

Figure 1. A female Wood Duck incubates her eggs.

in three. The birds form pairs when on their wintering grounds, and the males follow their mates to their hatching or earlier nesting sites; thus males do not return to their hatching or earlier nesting sites unless they happen to pair with females from the same nesting localities.

Wood Ducks readily nest near human dwellings, and when a dwelling is located reasonably near the necessary water, these ducks can be induced to nest within easy view of a window. However, Wood Ducks nesting near such dwellings provide little entertainment to humans because the birds remain outside but near the boxes so little of the time that they are seldom seen there. I have known of several pairs of Wood Ducks nesting immediately beside human dwellings where the presence of the birds was unknown until the ducklings were seen leaving their nests. However, by assiduous watching, males can be seen near the boxes in the early morning when they accompany their mates on cavity explorations, and the view of a wild male Wood Duck just outside one's window provides an experience always to be treasured.

Obviously it is most satisfying to attract Wood Ducks near our own homes, but for various reasons many of us cannot feasibly achieve this goal; nevertheless we need not be entirely deprived of experiences with nesting Wood Ducks, for we can find new and satisfying experiences in observing the nesting activities of these birds merely by mounting boxes on shores of accessible rivers. Permission to erect the boxes can ordinarily be readily obtained from landowners having appropriate habitat on their properties. Sections of rivers where the gradient is low are most satisfactory for later brood rearing and hence also for erection of the boxes.

River habitats appear to offer the best possibilities for helping Wood Ducks in the Carolinas. In Ohio, as many as two broods of ducklings per mile were found on 10-mile sections of the Scioto River; whereas, in float trips over 25 miles of the Tar, Neuse, and Pasquotank Rivers in North Carolina, only six broods were found, or about one brood per 4 miles of travel. Nest boxes were used immediately after they were placed on the Tar River, suggesting that the low number of breeding Wood Ducks on these North Carolina rivers probably results from a shortage of suitable nesting cavities. This shortage can be overcome by provision of nest boxes.

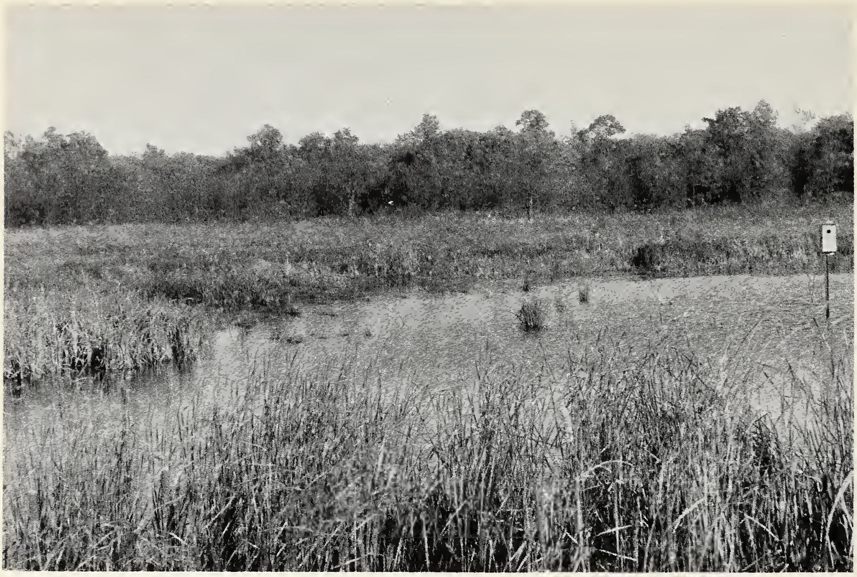

Figure 2. A small Ohio pond favored by Wood Duck broods and containing a properly placed nest box.

Wood Ducks normally soon use boxes properly placed for their use, as was demonstrated by J. R. Hester at his pond near Wendell, N. C. Three nest boxes were erected in 1954, and one box was occupied the first year. In the second year, all of the five boxes which had been erected were used by Wood Ducks (Hester, 1955). At Hester's Pond in 1961, there were 27 successful nests producing 372 ducklings (Hardister, 1963).

Eastern Bluebirds *(Sialia sialis)* seem to have captured most of the concerns of naturalists and bird clubs establishing nest box trails, and erection of nest boxes for Wood Ducks has been somewhat neglected, except by state agencies and hunting groups. True, a bit of additional equipment is needed on a Wood Duck nest box trail in the form of a small boat and a ladder, but work on rivers with nesting Wood Ducks offers additional attractions not available in following bluebird nest box trails on motor highways.

The state fish and game agencies in several northern states have erected relatively large numbers of nest boxes for Wood Ducks, particularly those in Massachusetts, Vermont, Illinois, and Ohio. During the period from 1949 to 1953, approximately 3,500 Wood Duck nest boxes were erected by employees of the Massachusetts Division of Fisheries and Game (Grice and Rogers, 1965). The fish and game agencies in the southern states have been somewhat less active in erecting nest boxes for Wood Ducks; however, in 1971 the South Carolina Wildlife Resources Department initiated a Wood Duck nest box program in their state, erecting 200 boxes. In North Carolina the Wildlife Resources Department is maintaining only about 100 boxes.

COMPETITORS AND PREDATORS

In some areas use of Wood Duck boxes by Starlings *(Sturnus vulgaris)* presents a formidable problem, the Starlings even building their nests over growing clutches of eggs of Wood Ducks. The Wood Ducks lay their eggs in the early morning and leave the nest unattended during the time between daily egg layings, thus giving the Starlings opportunities to usurp the nesting cavities even when the clutch of eggs is being laid. Nests are abandoned by the female Wood Duck after Starlings have built their nests on top of her eggs. However, after her clutch of eggs is complete and incubation has started, the female Wood Duck is able to discourage entry of the box by Starlings merely by giving a hissing sound when the Starlings alight on the box. Starlings usually present little of a problem in competition for use of nest boxes placed on rivers remote from human dwellings.

Other species of birds than Starlings sometimes compete with Wood Ducks for use of nest boxes, particularly Screech Owls *(Otus asio).* To solve the problem of such competition it is sometimes best to use enough boxes to meet the needs of both the competitors and the Wood Ducks, depending on the desirability of the other birds.

Competition for use of the boxes by Raccoons *(Procyon lotor)* is sometimes a problem, too, particularly when the boxes are mounted on trees. When only a few boxes are being used, this problem can be minimized by keeping the entrances of the boxes closed during the season when they are not being used by ducks, or from about early July until early March.

Raccoons sometimes pose serious problems in connection with Wood Duck nest box programs by eating the eggs or incubating ducks. In a study in Massachusetts, McLaughlin and Grice (1952) reported that 26 of 30 nests were destroyed by Raccoons. A decline in use of the boxes sometimes occurs with passage of time, presumably as a result of disturbance from Raccoons. Boxes have been developed having various degrees of effectiveness for protecting Wood Duck nests from Raccoons (see Webster and Uhler, 1964). Increase in numbers of nesting Wood Ducks can be expected with passing of time if plenty of boxes are always available to the ducks and if predation on the incubating ducks or their eggs does not become excessive. If predation becomes excessive it is sometimes best to move the boxes to new locations.

Fox Squirrels *(Sciurus niger)* also destroy many Wood Duck eggs, Bellrose (1955) in Illinois reporting 419 of 820 clutches destroyed by Fox Squirrels. Seemingly, Gray Squirrels *(S. carolinensis)* do not destroy Wood Duck eggs (Stewart, 1957).

Snakes are also important predators of Wood Duck eggs in some areas. In Alabama, Florida, Georgia, and Louisiana the Gray Rat Snake *(Elaphe obsoleta)* was reported to be the chief predator of eggs in Wood Duck nests (Stewart, 1957). In Illinois, Bellrose (1955) found that Bull Snakes *(Pituophis sayi)* were responsible for 10 percent of the egg predation at Wood Duck nests. There has been little research on methods of preventing destruction of Wood Duck eggs by snakes.

WHAT MAKES PONDS SUITABLE FOR WOOD DUCKS?

Emergent vegetation for a place to rear their broods is a second habitat requirement which Wood Ducks refuse to compromise. There is often a shortage of brood rearing habitat in the necessary close association with suitable nesting cavities; then some water with emergent vegetation is desirable. Hardister (1963) reported that broods from 27 boxes on woods-surrounded Hester's Pond left the 6-acre pond soon after hatching and moved, presumably to Tarpley's Millpond about 1.5 miles away. On the other hand, I knew of a pond at the Olentangy Wildlife Experiment Station in Ohio containing 0.6 of an acre, two-thirds of which was covered with emergent vegetation, where five broods gathered in each of the two years, 1955 and 1956 (Figure 2). Several other ponds at the Olentangy Station also contained brood concentrations on less than 2 acres of water. In each case, the open water that was present was little used by the broods. In river habitats Wood Duck broods were often found to remain in areas with little or no emergent vegetation, but the broods then remained mostly near densely vegetated shores or islands.

Shallow water with emergent vegetation is desirable for optimum brood rearing habitat, but there should be a minimum of shallow water lacking emergent vegetation and having a growth of filamentous algae. The ducklings often dive when they are surprised feeding on the surface of water away from emergent vegetation, and in the presence of submerged filamentous algae they become entangled in the algae and drown. I knew of one brood in central Ohio that was thus quickly reduced from 11 to 6 ducklings, and it would have been further reduced except for my rescuing 5 of the ducklings found entangled in the algae (Stewart, 1966).

With many farm and fish ponds now scattered over the breeding range of the Wood Duck, there may seem to be an abundance of habitat suitable for Wood Ducks, the ponds only needing to have nest boxes added. In a publication of the U. S. Department of Agriculture, Neely and Davison (1971) noted, "Some fishponds have suitable places for Wood Duck nesting boxes . . . . The pond and its edges usually provide enough green plants, insects, and other summer food for the broods without any special management." Unfortunately a properly built fishpond lacks the shallow water and emergent vegetation so desirable for Wood Duck brood habitat. Fishermen do not want emergent vegetation on their ponds, but Wood Duck broods need places to hide.

Multiple use of ponds is ordinarily desirable, but production of Bullfrogs *(Rana catesbeiana)* is one use that should not be combined with production of Wood Ducks, although a Wood Duck pond is also suitable for Bullfrogs. At a pond at the Olentangy Wildlife Experiment Station in Ohio where I had just noted the mysterious disappearance of one duckling from a brood of five, I quickly captured two Bullfrogs after releasing onto the pond two ducklings with fish lines attached to their legs (Stewart, 1967). Largemouth Bass *(Micropterus salmoides)* probably capture and eat Wood Duck ducklings also, but I have no information on the extent of such predation. Research is needed on this matter.

As a combination developed by nature, Beavers *(Castor canadensis)* and Wood Ducks are particulary satisfactory together, a Beaver pond providing ideal habitat for Wood Duck broods. In Alabama, Speak (1956) found at least five broods of Wood Ducks on a Beaver pond of 25 acres. But Beavers are not welcomed by many landowners because they cut trees and flood land that could be otherwise used; thus this natural method of producing Wood Duck habitat was displaced with the coming of modern materialism, and it holds little or no prospect of a return in a meaningful manner unless perchance the apparel styles of humans might change to demand beaver fur.

The provision of ponds suitable for Wood Ducks in rearing their broods may prove to be a particularly stubborn problem in the Carolinas because malaria-bearing mosquitoes also breed in shallow water with emergent vegetation. The laws of North Carolina forbid construction of a pond as large as one-fourth acre containing emergent vegetation during the brood season of Wood Ducks. In South Carolina the size of such a pond must be less than one-tenth acre. I once found a brood of newly hatched Wood Ducks beside a water hole less than a foot in diameter, but they remained there only during their first day or two out of the nest. It is doubtful if large numbers of Wood Duck broods would remain until their flying age on ponds of less than one-fourth acre, but research is needed on this question. New research is sorely needed also on methods for controlling mosquito larvae so that ponds can be built suitable for use by Wood Ducks. Certainly, no one wants to propagate malaria-bearing mosquitoes as part of the cost of helping Wood Ducks.

To hold Wood Ducks in an area after they attain flight capability is still more difficult than holding them until that time. Then there should be logs, treetops, or vegetation-free islands available to the ducks over or near the water in somewhat secluded areas for daytime loafing places (Figure 3). It is desirable but not essential for the ponds to be near or in woodland. I knew of one brood of Wood Ducks in Ohio that remained several weeks after attaining flight capability on a pond about 100 feet from a human dwelling although there were only scattered trees nearby, but the pond contained an abundance of emergent vegetation and was surrounded with undisturbed plant growth. Holding the birds at this age depends on having the best habitat within a distance of some 8 to 10 miles. The birds normally cannot be held in an area throughout the day merely by providing food.

Figure 3. A woodland pond used as a loafing place by Wood Ducks.

ARTIFICIAL FEEDING

The ducklings eat whole shelled corn already when they are about 3 weeks of age, and artificial feeding can be started at this time. The corn can be placed on bare soil near the shore of the pond or river or on a wooden raft floating among emergent vegetation. The mother duck leading the brood normally does not feed with her brood but flies elsewhere to feed in the morning and evening. Feeding stations used by the broods are usually abandoned when the young attain flight capability and join the adults at their feeding sites. Likewise, feeding sites used by the adults may be abandoned when dispersal occurs about one month before southward migration starts in early November. Attracting Wood Ducks to winter feeding stations is best accomplished as a major goal on wildlife refuges, as the wintering ducks feed in flocks that do not readily change their feeding places. On the Savannah National Wildlife Refuge in southeastern South Carolina I once attempted to trap some Wood Ducks by placing shelled corn at their daytime loafing place, but the ducks actually spent the day sitting on the corn and left in the evening to fly to their regular feeding place without eating any of it. Artificial winter feeding or feeding during the hunting season is a special problem also because hunters may find the feeding stations and be tempted to shoot the "baited" birds illegally.

MANAGEMENT

When an open hunting season prevails, hunting is undoubtedly the chief cause of mortality of Wood Ducks after the birds have reached the flying age, and as many as 68 percent of a population may be killed and crippled by hunters in one year (Stewart, 1957). Approximately one-half million Wood Ducks may be bagged in a hunting season in the eastern half of the United States. As many as 29,290 have been bagged in one year in North Carolina (Donnelly, pers. com.).

Management of duck populations in the southeastern United States is aimed at harvest rather than production (see Neely and Davison, 1971), but with most ducks occurring in this area only during the fall and winter and with most people everywhere being more anxious to be on the receiving rather than the giving end, this emphasis on harvest is understandable. However, a major opportunity is being lost and a responsibility being neglected in the general failure to promote production of Wood Ducks in the southland. With the Wood Duck being the only wild duck breeding naturally throughout the southeastern United States, this species presents the only available opportunity for residents of this area to work directly with production of wild ducks.

The destiny of Wood Ducks is strongly set by hunters whose license fees furnish operating funds for state wildlife agencies and for waterfowl habitat restoration projects. Our agencies are doing the job they are paid to do, but wildlife protection is becoming increasingly complex as the Carolinas attract new industries and cities grow rapidly. Funds and personnel are needed to combat harmful pollution of wildlife habitat, to prevent unwise drainage projects proposed by private enterprise and government agencies such as the Soil Conservation Service and the Army Corps of Engineers, and to assist farmers and enlightened developers in using their land in harmony with nature. There is a growing urgency for reduction in depletive use of wildfowl and other natural resources, and there are increasing numbers of people who can enjoy Wood Ducks without killing them; however, it will do no good to spare ducks from the gun if they cannot find adequate nesting sites and unpolluted wintering grounds. Perhaps the time has come for all citizens to support wildlife protection through general taxes thus relieving state and federal agencies of any sense of special obligation to hunters in establishing wildlife management policies and hunting regulations.

ACKNOWLEDGMENTS

For replying to my letters requesting certain bits of information, I gratefully acknowledge the help received from the following persons: Jack A. Donnelly, North Carolina Wildlife Resources Commission; W. Brock Conrad Jr., South Carolina Wildlife Resources Department; Joseph P. Bachant, Ohio Department of Natural Resources; Sidney H. Usry, North Carolina State Board of Health; and Frank T. Arnold Jr., South Carolina State Board of Health. When doing the research forming the basis for this paper, I was supported by a fellowship from the Ohio Cooperative Wildlife Research Unit.

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203 Mooreland Dr., Oxford, North Carolina 27565

OBITUARY

DORIS CALLAN HAUSER

Doris Callan Hauser of Fayetteville, N. C., one of the state's outstanding amateur ornithologists, died 30 March 1972 at the age of 57. She was the wife of the Rev. Roscoe C. Hauser Jr. Her enthusiasm, close observation, keen intellect, and ability to explain in layman's terms did much to interest others in bird study. Mrs. Hauser's papers in *Chat* and other journals brought her into communication with ornithologists throughout the United States, in Europe, Japan, Thailand, Australia, and other countries. Her papers published outside the Carolinas include the following articles.

The Auk
  Vol. 76, July 1959, Reverse mounting in Red-bellied Woodpeckers.
  Vol. 77, July 1960, A record of *Pipilo erythrophthalmus articus* in North Carolina.
  Vol. 83, January 1966, Hummingbird survives through December in North Carolina.

The Wilson Bulletin
  Vol. 69, March 1957, Some observations on sun-bathing in birds.
  Vol. 71, December 1959, Notes on pairing and nest-building of mismatched vireos.

Journal of Mammology
  Vol. 45, March 1964, Anting by Gray Squirrels.

At the time of her death Mrs. Hauser was preparing for publication a paper tentatively titled "Anting in Wild Birds," which details observations of olfactory perception by birds dressing their plumage with a species of ant that has a pungent aroma.--MRS. NEILL A. CURRIE JR.

CBC

Roundtable

Dean of Bird Watchers: WENDELL P. SMITH

GARVIN HUGHES

Every year the CBC Christmas Bird Count includes a report from North Wilkesboro with one observer. This lone observer is Wendell P. Smith, 79, dean of bird watchers and one of the best ornithologists in the Southeast. Last December Wendell and I drove up the Yadkin River to look for waterfowl wintering on the Kerr Scott Reservoir. He was making his sixty-eighth Christmas Bird Count.

"You can never tell what will be found around the lake," Wendell said. "Once, after a storm on the coast, we found two Red Phalaropes and a flock of Golden Plovers that had been driven this far inland by the storm."

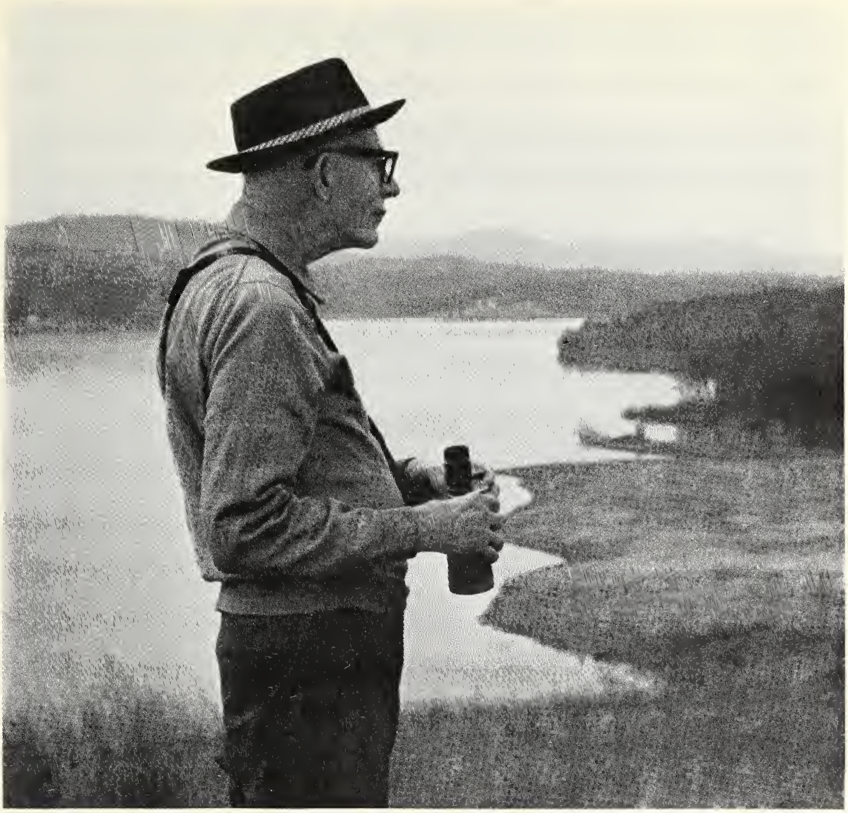
Born at Wells River, Vermont, Wendell was confined to the family farm by a childhood illness. The self-taught naturalist has never attended school a day in his life. He was taught in the home by his mother and at an early age began the lifetime study of the natural history of the family farm. On his daily walks around the farm, young Wendell began keeping records of nesting birds and of the arrival and departure dates of migratory birds moving through the Connecticut River valley.

Although most of his life was devoted to the study of a 100-acre hill-country farm, he became well known in scientific circles for his discoveries. He has been elected to learned societies, contributed to leading scientific journals, and for 25 years he served as the State Ornithologist of Vermont. In 1954 he retired from this position and moved to North Wilkesboro near the home of his wife, the former Louise Pearson of Moravian Falls.

Once settled in North Carolina, Wendell immediately began studying the natural history of Wilkes County and the northwestern piedmont. Every year he searches the surrounding countryside for nesting birds and records the passage of migratory species. A few years ago he was invited to Washington, D. C., to be honored by the U.S. Bureau of Sports Fisheries and Wildlife for his volunteer contributions to its Migratory Bird Study. At that time he had reported migration data to the bureau for 57 years. When the study was complete in 1969, Wendell's records covered 65 continuous years.

Wendell is very active in the affairs of the Carolina Bird Club, and has served as treasurer of the club. His amazing ability to identify a bird with a quick glance or a few notes of its song has made him a popular figure on the club's field trips. His presence on a trip always attracts a large group of birders. A field trip with him is a quick course in bird identification because Wendell is happy to share his lifetime accumulation of nature lore. "You don't need a guide book with Mr. Smith," a young birder once commented. "He knows all of the birds."

We asked how he had adjusted to the Yadkin River Valley after a lifetime in the Connecticut River Valley in Vermont. "There isn't a lot of difference," Wendell replied.



Wendell P. Smith checks the Kerr Scott Reservoir for waterfowl wintering on the lake. The 79-year-old dean of bird watchers was participating in his sixty-eighth annual Christmas Bird Count. (Photo by Garvin Hughes.)

"Nature is much the same everywhere. We have many of the same birds passing at migration, but I do miss the Snow Buntings in winter."

A lifetime of patient observation has taught Wendell Smith the continuity of nature's show. Forever old, and yet forever new; he knows there is always something new and exciting waiting to be discovered.

Department Editor Needed

Beginning with this issue of *Chat,* CBC Roundtable combines the two popular columns that formerly appeared in the bulletin, Bird Watcher's Roundtable and Carolina Birds and Birders. Willie Morrison finds she is no longer able to combine editing with her busy schedule of home, church, and community activities. Doug Pratt is in graduate school at Louisiana State University, and Mark Simpson is attending Yale University Medical School. The Editor appreciates the efforts of the three excellent staff members. Replacing them will be difficult. If you are interested in editing this department, please write Eloise Potter, Box 277, Zebulon, N. C. 27597.

Conservation

. . . with Marie Mellinger

What is so rare as a day in June?

"What is so rare as a day in June, then if ever come
perfect days,
When heaven tries earth if it be in tune, and over it
softly a warm ear lays,
And whether we look or whether we listen, we hear life
murmur and see it glisten,
For every clod feels a stir of might, an instinct within it
that reaches and towers,
And groping blindly about it for light, climbs to a soul in
grass and flowers."

On a pleasant June morning, with a resounding bird chorus echoing through the trees, it is pleasant to write about the forming of the bird watching movement in America. After hearing the great Carl Bucheister give an account of the founding of the National Audubon Society, women's lib should enjoy hearing what a big part women took in birding beginnings. When Grinnell founded the Aububon Society he named it not only for John James, but for Lucy Audubon who was his tutor when he was a child. Men were asked to pledge, "I will not kill any bird whose flesh I will not eat," and women, "I pledge I will not wear in my millinery, feathers of egrets or birds of paradise."

Mean time some ladies had started the Massachusetts Aubdubon Society, and when Grinnel gave up his society, Massachusetts Audubon took it over. By 1905 several independent organizations were melded together with T. Gilbert Pearson, from Guilford College, N. C., as first executive secretary. In 1906 the name was changed to National Audubon Association, with a single purpose "to preserve bird life." By 1930 this concept was changed "to preserve soil, water, plants, and wild life." This was the beginning of Audubon's ecology movement, not the study of an independent species, but the study of the whole, all related and interdependent. "To save the heron you must save the marsh."

Mr. Bucheister stated, "Today we must be concerned with the totality of our environment. It is a question of survival, not only of species of wild life and plants, but of human survival." And he concluded, "When you save natural beauty and teach others to see and feel and cherish it, you are on the side of creation, doing something for the human spirit."

* * * * *

If you have ever enjoyed the heart of a southern swamp in spring, when you feel the mystical quality of being surrounded by bird song and smell the sweetness of the blossoming heaths, you will be happy to know that two logging firms have cancelled their timber cutting contracts in the Santee Swamp. Long live the wilderness!

* * * * *

There has been some helpful publicity in South Carolina newspapers on enforcement of the hawk and owl law. Several arrests have been made, but those arrested usually escape by pleading ignorance of the law. Birds of prey protected include all hawks, both vultures, harriers, falcons, and eagles. Please publicize this law as much as possible!

* * * * *

June and vacation time go together, but camping vactions may soon be on a reservation only basis. Over-crowding and demand for too many camping refinements tax nature to the utmost. Erma Bombeck wrote that man camps and then "must have his electric blanket, his electric coffee pot, his electric martini mixer, his t.v., his high fi (but he complained that the sound of the waterfall interfered with his high fi). Most campers demand a swimming pool, a boat dock, a laundermat, a general store, and a half a dozen playgrounds." A national out door writer warned that "true camping will soon become extinct if people don't stop demanding more and more of the comforts they seldom have at home."

Plans are being made for recreation areas along the proposed Trotter Shoals flowage, some 200 miles of them involving 14 counties in Georgia and 8 counties in South Carolina. This would be a national recreation (?) area with such goodies as golf courses, motels, developed indian villages, antebellum plantations, zoos, and outdoor amusement parks. I think the Savannah would rise and flood in protest!

Edward P. Cliff, of the U. S. Forest Service, said, "Public use is taxing National Forest land to the danger point, and may lead to stringent restrictions on usage of wilderness areas."

Books We Recommend

Two new books, one written by young people, would do everyone a world of good.

The Foxfire Book-$3.95 in paperback, available from Foxfire, Rabun Gap, Georgia 30568.

Where Have All the Flowers, Fishes, Birds, Trees, Water, and Air Gone? by Osborn Segerberg, Jr., available from David McKay Company.

The Foxfire Book was written by the students of Rabun-Gap Nacoochee School, under the guidance of Eliott Wigginton. In the mountains we are but shortly removed from a time when man was still dependent on the resources of nature for his daily living. This was a world of wood, of hunting and fishing for badly needed food. To go back to such a world and enjoy the fabulous photographs of old timers and old time occupations, read this book.

In *Where Have* etc., Mr. Segerberg gives a comprehensive but easily read summary of our ecological problems and some possible solutions. He writes, "Much of the danger to man is summed up in the simple phrase 'we don't know'. We pollute the environment today, tomorrow the environment pollutes our children."

New Guide to Birds of Mexico

A Field Guide to the Birds of Mexico by Ernest P. Edwards contains 24 color plates illustrating nearly 500 Mexican species. Among the several artists is CBC member Douglas Pratt. For information about books, lithographs, note paper, and other items available from Dr. Edwards, write him at Box AQ, Sweet Briar, Virginia 24595.

Purple Martin House Plans

Purple Martin house plans and tips on attracting these interesting birds can be obtained by sending 25 cents and a stamped addressed envelope to Ray K. Walker, Box 711, St. Louis, Missouri 63188. Five copies for a dollar will be sent to one address in a single 8 cent stamped addressed envelope.

General Field Notes

JAMES F. PARNELL, Department Editor
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JULIAN R. HARRISON, Associate Editor
Department of Biology, The College of Charleston, Charleston, S. C. 29401

NEW ASSOCIATE EDITOR

We are pleased to announce that Julian R. Harrison of the Department of Biology at The College of Charleston has accepted the position of Associate Editor of the General Field Notes for *Chat*. Notes pertaining to bird records for South Carolina should be sent directly to Dr. Harrison, who also serves on the CBC Records Committee. Dr. Harrison is a past president of Charleston Natural History Society and currently is compiler for the Charleston bird counts. He and Dr. Parnell worked together closely during their student days at North Carolina State University, and their new collaboration will undoubtedly prove beneficial to bird students in the Carolinas.—EFP

Heronry Found Near Ehrhardt, S. C.

LAWRENCE H. ROBINSON
Soil Conservation Service
P. O. Box 493, Walterboro, S. C. 29488
11 June 1971

The heronry is located about 100 yards NW of SC 64, 1.7 miles S of US 301, and 8 miles W of Ehrhardt in Bamburg County, S. C. It is about 5 acres in size and located in a pond cypress *(Taxodium ascendens)* bay, commonly known as a Grady pond or Carolina Bay. A few black gums *(Nyssa sylvatica)* occur in the cypress dominated overstory. Button-bush *(Cephalanthus occidentalis)* and black willow *(Salix nigra)* are the main understory species. Lotus *(Nelumbo lutea)* and duckweed *(Lemna minor)* are prevalent aquatic plants along with pickerelweed *(Pontederia cordata)*, arrowhead *(Sagittaria* sp.*)*, and blue flag *(Iris virginica)*.

I first noticed the heronry in 1969, but no nest counts were made that year. James Preacher and I counted 25 White Ibis *(Eudocimus albus)* nests in May 1970. Fifteen pairs of White Ibises were nesting in the heronry 27 May 1971. On 8 June 1971 Robert Beach and I estimated that there were 30 pairs of Cattle Egrets *(Bubulcus ibis)*, 20 pairs of Little Blue Herons *(Florida caerulea)*, 5 pairs of Common Egrets *(Casmerodius albus)* and 2 pairs of Anhingas *(Anhinga anhinga)* nesting there. Also on 8 June 1971, 27 White Ibises were nesting there, and a single Wood Ibis *(Mycteria americana)* was observed soaring over the heronry. On 16 June 1971 a few of the White Ibises were still incubating eggs.

[DEPT. ED. – This heronry appears to be 25 to 30 miles from the one found by Post in 1968 near Springfield, S. C. (*Chat*, 34: 31:33 .]

A Second Ross' Goose at Pea Island, N. C.; Verification of Specific Purity of These Birds

EDMUND K. LeGRAND
331 Yadkin Drive, Raleigh, N. C.

28 January 1972

A Ross' Goose *(Chen rossii)* was observed at leisure on the morning of 22 January 1972 by Harry LeGrand, Gard Otis, Sebastian Patti, and me beside the road at North Pond, Pea Island N.W.R., N. C. The bird was about 40 feet away feeding with about 50 Snow Geese *(Chen hyperborea atlantica)* and was easily distinguishable by its smaller size and perfectly white plumage. The Ross' Goose was studied very carefully through 60X, 30X, and 20X scopes plus binoculars. The bill was very short and stubby compared with the bills of the surrounding Snow Geese; and the large greenish-gray base of the pink bill, which had absolutely no "grinning" or "smiling" patch, were all well seen. The warty protuberances at the base of the bill were seen, but only with great difficulty. This bird had a deformed right foot and was thus undoubtedly the same bird that was first seen by Joshua Lee and Janice Lee on 27 and 28 December 1967 (*Audubon Field Notes*, 22:429) and was later observed and photographed by Paul A. Buckley et al., (*Auk*, 86:551-552). This goose has been seen occasionally during past winters at Pea Island since the first sightings, and many observers (including Harry LeGrand and author) saw the bird on the Bodie-Pea Island Christmas Count.

At 4:00 PM on 22 January we again observed a Ross' Goose with a flock of Snow Geese; however, this bird was about one-half mile away from where we had seen one earlier. The four of us immediately drove back to look for the original goose, which we found exactly where it had been earlier in the day. We then drove back to our new Ross' Goose to examine it closely. This new bird looked exactly like the other Ross' Goose except that the warty protuberances could not be noted due to the excessive distance (about 75 feet). As soon as we left this bird we found the original goose where it had been all day. Both birds were seen in flight: the original bird was later flushed and it flew perfectly well, and the new Ross' Goose once flew several feet to a safer position.

The few wintering Ross' Geese in the Midwest (they normally winter in the Central Valley of California) are known to hybridize with Lesser Snow Geese *(Chen hyperborea hyperborea)*. The resulting intermediate geese more closely resemble Ross' Geese than Snow Geese, although these intermediates have a horizontal black line or "smile patch" on the bill about 6 to 8 millimeters wide, or half the width of the "grinning patch" of Snow Geese (Figure 1). Ross' Geese have no such patch. There are other marks which separate Ross' Geese from intermediate birds such as overall size, bill size and shape,

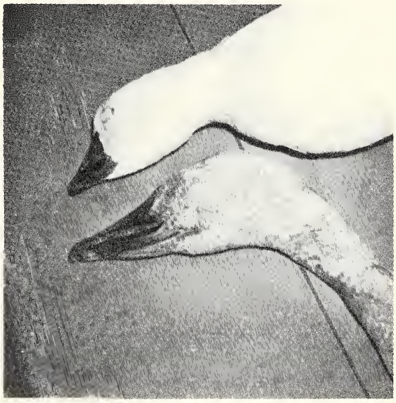

Figure 1.

Ross' Goose

Snow Goose

(Specimens from North Carolina State Museum of Natural History)

(Photo by Elizabeth Teulings)

extent of the gray base of the bill, and the warty protuberances on the bill (*Auk*, 88:856-873), but these are difficult to observe. We studied the two geese at Pea Island very carefully while checking for all of the marks. Because none of the characters of the intermediates were seen and since all of the marks of the Ross' Goose were noted, we feel certain that these two birds were indeed pure Ross' Geese. One of the observers, Sebastian Patti, has seen about 15 Ross' Geese in Kansas and Missouri, one of which he observed under nearly perfect conditions.

To my knowledge these two birds are the only Ross' Geese ever reported on the Atlantic coast. Because Ross' Geese have been extending their winter range eastward to the Midwest (*Auk*, 88:856-873) and since these two geese were never seen together, indicating that they came to Pea Island independently, it is quite possible that more Ross' Geese will appear on the Atlantic coast in the near future.

[DEPT. ED. -- These geese have been seen by a number of other qualified birders in addition to the careful study of the author. While it is recognized that separation of Ross' Goose from its hybrid with the Snow Goose is very difficult under field conditions, these studies have been carefully made with full knowledge of the possibilities. Thus, on the basis of this study the Ross' Goose should be retained on the hypothetical list for North Carolina. Because collection of one of these birds was not possible, every effort should be made to secure good close-up photographs to further document the record.]

Inland Record of a Black Skimmer At Roanoke Rapids, N. C.

J. MERRILL LYNCH
539 Henry Street, Roanoke Rapids, N. C. 27870

25 January 1972

On 6 and 7 October 1971 an adult Black Skimmer *(Rynchops nigra)* was found at Roanoke Rapids Lake just north of Roanoke Rapids, N. C. This location is about 95 miles inland from the Atlantic coast. The skimmer was discovered perched on a concrete platform directly adjacent to the V.E.P.C.O. dam structure at about 6:30 PM on 6 October.

Watching it for at least 20 minutes, I clearly saw the distinctive scissor-like bill plus all other field characteristics from about 60 feet. It was relatively tame on both days, allowing me to approach within 30 feet before flushing. When flushed, it circled low over the water, returning to its resting place on the platform after 2 or 3 minutes. If not molested, the skimmer remained perched on the platform; in fact, I never saw it take flight except when intentionally flushed. Its flights were always of short duration and never more than 100 yards from the platform. During the two days of observations, the skimmer was not seen to engage in feeding activities. Although flight appeared strong and well sustained, its apparent lack of appetite led to speculation regarding the bird's general physical condition. Its hesitation on leaving its resting spot was also puzzling.

On 7 October Bill Collier and I returned armed with cameras to take some photographs. Excellent light conditions prevailed, allowing us to secure several recognizable photographs even though our equipment was quite basic and our experience limited.

In all probability the Black Skimmer at Roanoke Rapids Lake was driven inland by Hurricane Ginger's passage through North Carolina a week earlier. The 1959 revision of *Birds of North Carolina* cites no previous inland records for this strictly salt-water inhabitant.

Summer Range of the Whip-poor-will In the Savannah River Valley

GERALD E. KNIGHTON
3 Linnet Loop, North Augusta, S. C. 29841

3 October 1971

The summer range of the Whip-poor-will *(Caprimulgus vociferous)* in the Savannah River Valley is not clearly defined in the literature. Murphey, a resident at the fall line, classified the Whip-poor-will in 1937 as an uncommon transient in the middle Savannah Valley. Sprunt and Chamberlain in 1949 listed the South Carolina summer range as "north to Greenville and Cherokee County; east to Chester County, south to Edgefield; west to Oconee County," but they furnish specific records only for Gaffney and Clemson, S. C. In 1956 Denton reported summering birds at Elijah Clark State Park, Lincoln County, Georgia. Burleigh in 1958 listed no breeding season records in the Savannah River Valley below Toccoa, Ga. At the Atomic Energy Commission's Savannah River Plant, beginning along the Savannah River approximately 15 miles below the fall line, Norris conducted extensive field studies during the late 1950s, but the 1963 publication of a summary of his records contains no records of Whip-poor-wills.

Between 14 May and 21 June 1970, Gerald E. Knighton Jr. and I made 10 night trips in Aiken and Edgefield Counties, S. C., in an attempt to locate the eastern edge of the Whip-poor-will range. The trips covered SC Hwy 230 and some roads connecting to this highway for 15 miles W of the fall line. East of the fall line, we covered US 278 and adjacent roads for a similar distance. The trips located calling Whip-poor-wills in seven locations, six of which are in Edgefield County and range from 5 to 15 miles W of the fall line. The seventh site, around the North Augusta Country Club, is along the Aiken-Edgefield County line and approximately 3 miles W of the fall line. Whip-poor-will calls were heard at the North Augusta Country Club site on six nights during May and June 1970. No Whip-poor-wills were heard east of the fall line.

J. F. Denton (in press) reports similar results in night searches made on 15 and 17 June 1970 in Columbia County, Ga. He located no birds closer than 14 miles from the fall line.

In 1971, I was unable to make night trips to the areas east of the fall line. Several trips into the Edgefield County area, west of the fall line, located calling Whip-poor-wills during April, May, June, and July 1971. The earliest record, 15 April 1971, and the latest record, 8 July 1971, plus others between those dates were made at the North Augusta Country Club site.

Unless future summer records are made below the fall line, it appears that the summer and probable breeding range of the Whip-poor-will in the Savannah River Valley should be described as extending down the Savannah River to the fall line.

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Correction

Latitude for the sightings of 27 April 1969 is given incorrectly in the field note "Early Records for Pelagic Birds off the North Carolina Coast" by Frank Enders that appeared in the March 1972 *Chat* (36:30-31). The correct coordinates are 34 degrees 51' N, 75 degrees 46' W.

Loggerhead Shrike with Unusually Large Egg Clutch

WALLACE MARK THOMPSON
4950 University Drive, Wilmington, N. C. 28401 20 January 1972

The nest of a Loggerhead Shrike *(Lanius ludovicianus)* was found on 24 April 1971 approximately 90 yards E of Hwy 132 on the campus of the University of North Carolina at Wilmington. It was approximately 10 feet up in a live oak tree *(Quercus virginiana)* in a scattered grove. When the nest was discovered it contained nine Shrike eggs. According to *Life Histories of North American Wagtails, Shrikes, Vireos, and Their Allies* (Arthur Bent, 1965), the normal clutch is four to six eggs with four to five being found most often. No reference was located which referred to a clutch of eggs this large.

On 4 May 1971 the nest contained five young shrikes and four eggs. I visited the nest on several subsequent occasions but could not determine the number of eggs present. On 18 May the nest contained four young that left the nest at my approach. A single egg remained in the nest. The fate of the other three eggs is unknown.

Blue Grosbeak and Painted Bunting At Southern Pines, N. C., in Winter

J. H. CARTER III
P. O. Box 891, Southern Pines, N. C.

MARY K. WINTYEN
280 W. New Hampshire Avenue, Southern Pines, N. C. 10 August 1971

On 22 December 1970, a Blue Grosbeak *(Guiraca caerulea)*, was seen approximately 4.5 miles NNW of Southern Pines, Moore County, N. C. Edmund LeGrand, Harry LeGrand, and Robert Teulings collaborated with me on the identification of the bird. The bird was flushed from dead weeds which formed a thick cover 1.5 to 3 feet high in a field. It was observed at length as it sat in a small tree. All field marks were noted, including the characteristic "tail flicking" of this species. Its brown plumage indicated it to be a female, or possibly an immature male. There are three previous winter records for this species in North Carolina. Two were recorded on 30 December 1959 on the Wilmington Christmas Count *(Chat,* 24:6-11), one was listed on the Stanley County Christmas Count in 1966 *(Chat,* 31:22), and two remained at Chapel Hill during the 1969-1970 winter *(Chat,* 34:107).

On 24 December 1970 a Painted Bunting *(Passerina ciris)* in green plumage appeared at a feeder in Southern Pines. It repeated at that station on 62 days through 12 April, and it was seen once in a yard about two blocks away. It fed mainly at a feeder filled with millet. Though very shy, all field marks were repeatedly noted by both authors from distances as close as 6 feet. It preferred to feed alone, but had some tolerance for Field Sparrows *(Spizella pusilla)* and American Goldfinches *(Spinus tristis)*. The bird survived some quite cold weather, including three ice and snow storms. The Bent volumes on finches (U.S. Nat. Mus. Bull. 237, p. 153) state that the normal winter range is no further north than southern Louisiana and central Florida. It is described as casual in winter north to Fayetteville, N. C. An adult male was present at Fayetteville from 13 through 25 February 1962 (*Chat*, 26:76-77). This species is known to occur rarely on the southeastern coast of North Carolina in winter (*Chat*, 16:16; 18:27, 57; Pearson, Brimley, and Brimley, *Birds of North Carolina,* 1959 edition, p. 363). This appears to be the second inland winter record for the Painted Bunting in North Carolina.

BRIEFS FOR THE FILES

HARRY E. LeGRAND JR., *Guest Compiler*
331 Yadkin Drive, Raleigh, N. C. 27609

(All dates winter 1971 - 1972 unless otherwise stated)

COMMON LOON: Six birds seen on Lake Benson near Raleigh on 19 December by Mike Browne were a good inland count.

RED-NECKED GREBE: A single bird was studied carefully at Pea Island on 12 February by Louise Bethea and party.

HORNED GREBE: Merrill Lynch had a peak count of 153 at Roanoke Rapids Lake, N. C., on 28 January; and 18 birds were counted in the Winston-Salem area on 14 March, Robert Witherington, Charles Frost and Ramona Snavely. A conservative 6,000 were seen in the surf off Nags Head, N. C., on 3 February, Floy Burford and party.

EARED GREBE: One bird was carefully studied at Oregon Inlet by Carl Carlson and party on 9 January.

SOOTY SHEARWATER: One observed within 60 feet of the beach at Pea Island on 8 January by Carl Carlson and party is the first winter record for North Carolina.

DOUBLE-CRESTED CORMORANT: Jay Carter estimated 1,000 birds passing Wrightsville Beach, N. C., in a few minutes on 14 December.

COMMON EGRET: Three were seen near Raleigh on 14 December by Ross Silcock; and one was found on 11 December at Occoneechee Neck, Northampton Co., N. C., and remained there through the end of the month, Merrill Lynch.

AMERICAN BITTERN: One seen at Occoneechee Neck on 4 March was an early migrant, Merrill Lynch.

WHITE IBIS: Up to 50 wintered in the Morehead City, N. C., area for at least the second straight year, John Fussell.

WHISTLING SWAN: There was a widespread dispersal of swans from their usual wintering grounds in eastern North Carolina. Birds were recorded inland near Southern Pines, N. C., in December (Jay Carter, Mrs. Lawrence Davis), Occoneechee Neck (Merrill Lynch et al.), and Winston-Salem (Ramona Snavely et al.) in February; and south along the coast to Onslow Co., N. C. (Gilbert Grant), and the Cape Romain - Charleston area of South Carolina, with a peak of 75 near McClellanville (Jay Shuler, Ted Beckett, Dennis Forsythe).

CANADA GOOSE: Up to 1,125 birds in two flocks in the Occoneechee Neck area in February represent a large inland count, Merrill Lynch.

BRANT: This species was found at several locations on the North Carolina coast south of the usual winter range in the Hatteras - Ocracoke area. Twenty were counted on 17 January at Cedar Island NWR (Roger Steiner), 3 were seen on the Newport River near Morehead City in early February (Eugene Pond), 25 were present at Wrightsville Beach from mid-January through February (Bud Needham), and 15 were at Carolina Beach on 24 January (Jay Carter, James Parnell, et al.).

BLUE GOOSE: One bird was at Cedar Island NWR on 9 December, Roger Steiner.

GADWALL: An enormous concentration of 15,000 to 20,000 was found at the Santee Gun Club near Georgetown, S. C., on 20 February, Ted Beckett.

COMMON TEAL: Two males were seen at the same time on North Pond at Pea Island on 22 January by Edmund and Harry LeGrand, Gard Otis, and Sebastian Patti; another male was seen at Bell's Island south of Currituck, N. C., on 20 February by Robert Ake.

SHOVELER: A good count of 70 was made on Belews Creek Lake in Forsyth Co., N. C., on 30 March by Robert Witherington, Charles Frost, and Ramona Snavely.

GREATER SCAUP: A flock of nine was unusual at Roanoke Rapids Lake on 28

January, Merrill Lynch. Up to three males were present near Raleigh between 27 February and the end of March, Harry and Edmund LeGrand.

COMMON GOLDENEYE: Jay Carter had a peak count of five birds at Whispering Pines, Moore Co., N. C. on 22 January.

BUFFLEHEAD: An estimated 1,500 were present at Pea Island NWR on 10 March, George Peyton.

OLDSQUAW: Up to 15 were seen regularly in the ocean off Wrightsville Beach during March, Bud Needham.

COMMON EIDER: A single male was seen at Rich's Inlet north of Wrightsville Beach on 5 January by Bud Needham, fide Dot Earle.

COMMON MERGANSER: Eight birds (4 males) were observed on Roanoke Rapids Lake on 16 January by Merrill Lynch, and again on 18 February by Harry and Edmund LeGrand. Noteworthy also were two on 14 March at Winston-Salem by Ramona Snavely and party; and two birds at Pawley's Island, S. C., on 10 December, Frederick Probst.

ROUGH-LEGGED HAWK: One bird was observed near Orangeburg, S. C., on 14 December by S. A. Gauthreaux Jr., as reported by Dennis Forsythe.

MARSH HAWK: Merrill Lynch averaged 2.1 birds per trip at Occoneechee Neck during February and March, with a high of six on 12 February. A concentration of nearly 50 birds seen cruising over grain fields on South Island near Charleston on 12 December was unusual, Ted Beckett.

OSPREY: One wintered in the vicinity of Gloucester in Carteret County, N. C. (Tom Wade), and several wintered in the Charleston area (Ted Beckett). One was early at Kerr Scott Reservoir in Wilkes County, N. C., on 6 March (Louise Smith, fide Wendell Smith).

PEREGRINE FALCON and PIGEON HAWK: One or two of each species were present in the Bodie-Pea Island area throughout the winter, Gilbert Grant, Harry LeGrand, et al.

VIRGINIA RAIL: One was found at Occoneechee Neck on 5 and 26 February by Merrill Lynch and Bill Collier, a rare winter record for inland North Carolina.

SORA: Up to three birds were present at Occoneechee Neck between 12 and 20 February, Merrill Lynch, Robert and Elizabeth Teulings.

YELLOW RAIL: One was flushed twice near Buxton, Dare Co., N. C., on 6 February by Jay Carter and party.

PIPING PLOVER: As many as 70 wintered near Beaufort, N. C., and at least 95 were counted on 19 December by John Fussell.

AMERICAN GOLDEN PLOVER: A single bird seen by James Parnell and Jay Carter on 8 and 9 December at Long Beach, N. C., was late as well as unusual.

RUDDY TURNSTONE: A large winter count of 34 birds was noted at Wrightsville Beach on 8 January by Dot Earle.

COMMON SNIPE: Unusually large concentrations were found at Raleigh in late March (up to 200 on 18 March by Robert Hader, Harry and Edmund LeGrand) and at Occoneechee Neck (102 on 18 March by Merrill Lynch and Bill Collier).

LESSER YELLOWLEGS: One bird was very early at Occoneechee Neck on 5 February, and up to two were present through the end of March, Merrill Lynch.

GREATER YELLOWLEGS: Six were seen at Occoneechee Neck on 11 December, and five were present between 26 February and the end of March, Merrill Lynch.

PECTORAL SANDPIPER: One was early on 4 March at Bodie Island, Harry LeGrand.

GLAUCOUS GULL: An immature was seen at Oregon Inlet on 15 January by Gard Otis.

HERRING GULL: Two were seen near North Wilkesboro, N. C., on 8 January by Wendell Smith; another bird was observed near Winston-Salem on 5 February by Robert Witherington, Charles Frost, and Ramona Snavely.

RING-BILLED GULL: The remarkable concentration at Roanoke Rapids Lake reached a peak of 5,700 on 24 February, Merrill Lynch.

BLACK-HEADED GULL: Two birds were studied carefully in a flock of Bonaparte's Gulls on the Charleston waterfront on 25 March by Dick Viet and Peter Polslek. One was an adult in breeding plumage and the other an adult in changing plumage. The dusky under-wing areas and size difference with Bonaparte's were noted. This is the second South Carolina record.

BONAPARTE'S GULL: An excellent inland count of 35 was made at Raleigh on 15 January by Robert Hader.

DOVEKIE: Remains of a bird were found at Oregon Inlet on 8 January by Gilbert Grant.

SAW-WHET OWL: One bird was discovered roosting in a Raleigh high school library on 10 November 1970 by a group of students. The bird had entered through an open window and was later released out the window by the students. Harry LeGrand identified the bird from a photograph taken by one of the students.

WHIP-POOR-WILL: One was captured alive between Wilmington and Carolina Beach in early February, as reported by Jay Carter (specimen to U.N.C. at Wilmington).

WESTERN KINGBIRD: One was observed at Wrightsville Beach on the rather late date of 1 December by Jay Carter.

HORNED LARK: Unusually large numbers were present in plowed fields at Occoneechee Neck in February, with a peak count of 310 on 12 February by Merrill Lynch and Bill Collier.

WOOD THRUSH: One was studied carefully near Roanoke Rapids on 16 January in weather approximately 15 F., Merrill Lynch.

ORANGE-CROWNED WARBLER: One bird was unusual at Roanoke Rapids on 23 December, Merrill Lynch.

PARULA WARBLER: One bird was found dead in suburban Raleigh on 12 January by Chris Marsh. The bird had been dead for only a few days as judged by the good condition of the specimen. A male was early at Pea Island on 18 March, Gilbert Grant.

PRAIRIE WARBLER: One was very late at Greenfield Lake near Wilmington, 10 January, Kitty Kosh.

YELLOWTHROAT: Outstanding mid-winter counts for inland North Carolina were seven at Mason Farm near Chapel Hill on 22 January by James Pullman, and nine on 12 February at Occoneechee Neck by Merrill Lynch and Bill Collier.

WESTERN TANAGER: One was seen by Jay Shuler at McClellanville, S. C., on 14 December; another was photographed on Hilton Head Island, S. C., by Mrs. Jarvis Depkin (bird present from late January to mid-February); and one present at Charles Lincoln's feeder at Morehead City in mid-February was killed by a cat on 20 February (specimen to N. C. State Museum).

SCARLET TANAGER: A female came to Wendell Smith's feeder at North Wilkesboro on 30 January and remained in the vicinity for three days.

BLUE GROSBEAK: Unusual winter records were a bird observed at Raleigh on 7 January by Harry and Edmund LeGrand, and single birds banded at Hillsborough, N. C., by Charles Blake on 23 and 24 February.

PAINTED BUNTING: In the Wrightsville Beach area, two birds in Polly Mebane's yard and one in Katherine Alexander's yard were present all winter (reported by Dot Earle).

HOUSE FINCH: A male at Charles Lincoln's feeder in Morehead City on 13 February was a first record for that area. A few birds were present at Winston-Salem between 29 October and 29 March (fide Ramona Snavely), and Dot Garrett had a peak count of 14 at her feeder in Greensboro on 7 March.

RED CROSSBILL: A flock of 10 was seen near Durham on 6 December by Mrs. Paul S. Payne; a flock of 7 was observed on 12 December at Winston-Salem by Charles Frost; and a group of 6 to 10 birds was present in Carrboro, N. C., from 23 December to 11 March, Mark Simpson.

COMMON REDPOLL: A well-marked individual was seen at Winston-Salem on 20 November by Robert Witherington and J. F. Farley.

WHITE-CROWNED SPARROW: One on 26 February at Occoneechee Neck was unusual for that locality, Merrill Lynch.

Carolina Bird Club
INC.

Founded 6 March 1937 **Incorporated 8 August 1949**

Carolina Bird Club is an incorporated association for the study and conservation of wildlife, particularly birds, chiefly in the Carolinas. Founded in 1937 as the North Carolina Bird Club, it was joined in 1948 by several South Carolina natural history clubs and the name changed to the Carolina Bird Club.

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Birds

The Chat

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The Chat

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OUR COVER—The countless thousands of shore birds that visit Carolina beaches offer birders some difficult field problems, but the Ruddy Turnstone wears a vest that makes it relatively easy to identify even in winter plumage, as shown in our cover photo by James F. Parnell.

THE SWALLOW-TAILED KITE: A REVIEW OF ITS OCCURRENCE IN THE SOUTHERN APPALACHIANS

MARCUS B. SIMPSON JR.

Until the latter half of the nineteenth century, the Swallow-tailed Kite *(Elanoides forticatus)* was widely distributed as a breeding bird in the southeastern United States and throughout much of the Mississippi River basin, ranging as far north as Minnesota and Wisconsin. By the turn of the century, however, the inland population had declined precipitously, leaving the coastal plain swamps of the Southeast as the last stronghold for this graceful and elegant bird. In Minnesota, for example, Roberts (1932) spoke of the large numbers of kites that had nested in the state until the 1880s, when the bird inexplicably began to disappear, there being only eight records from 1900 until the last sighting in 1923. In fact, the rapid and thorough demise of the entire Mississippi valley population prompted Bent (1937) to comment: "The seemingly almost complete disappearance of this beautiful and once frequent bird is difficult to understand."

The disappearance of the Swallow-tailed Kite from the Mississippi basin coincided with the beginnings of serious ornithological studies in North Carolina. Consequently, few local ornithologists had the opportunity of observing the kite's movements through the state at a time when the species nested not only in the Southeast but widely through the interior of the continent. Nevertheless, a review of the extant records indicates that the status of the Swallow-tailed Kite has not been adequately defined in the Appalachians of North Carolina, for Pearson, Brimley, and Brimley (1942) made no mention of the species from the mountains of the state.

OBSERVATIONS

The earliest records of the Swallow-tailed Kite from the southern Appalachians came before the Civil War, when Maxcy Gregg of Columbia, S. C., related his experience with the bird in a letter to Thomas M. Brewer. Brewer (1859) quoted from Gregg:

> "I may here mention, that I once in the end of July saw many of these Hawks sailing about near the top of the Balsam Mountain, one of the loftiest and wildest mountains in North Carolina . . . . I was told by a mountaineer, who was a great hunter and very observant, that they are seen in that vicinity every summer. The circumstance attracted my attention, because I had never seen the Swallow-tailed Hawk in any other part of the mountains, from South Carolina to Virginia, although I had rambled a good deal through that region."

Unfortunately, it is impossible to be certain of the precise location of Gregg's records, for the name "Balsam Mountain" has been applied to peaks in the Great Smoky, Great Balsam, Plott Balsam, and Black Mountain ranges. Nevertheless, the observations provide the first evidence that the kite occurred in the Appalachian region during the late summer months.

Nearly half a century later, the writings of John Simpson Cairns revealed additional evidence of the species' presence in the mountains of North Carolina. In the first of three papers on the birds of Buncombe County, Cairns (1887) listed the Swallow-tailed Kite as merely "accidental." As the years passed, however, he apparently became more familiar with the species, subsequently (1889) giving its status as "seen occasionally in August."

By the time of Cairns' final publication (1891), his increased field experience prompted the comments:

> "A few seen each season on the higher mountains. Transient, only during the fall."

Cairns also apparently mentioned the kite in his correspondence with Dr. J. W. P. Smithwick to assist in compiling an annotated checklist for North Carolina. Smithwick (1897) acknowledged these records by the comment:

> "A few seen every fall in the higher mountains."

In addition to these published records, Cairns listed the species in a manuscript on the birds of western North Carolina (1894), giving its status as:

> "Transient visitor, usually in October. Rare."

The publication of Cairn's papers attracted the interest of William Brewster of Harvard, and the two men began corresponding with regard to the avifauna of the southern Appalachians. Unfortunately, none of Brewster's letters have survived, although most of Cairn's replies are at Harvard's Museum of Comparative Zoology. In a letter dated 1 August 1887, Cairns inquired about Brewster's visit to the North Carolina mountains some two years earlier:

> "Did you hear any thing about the Swallow-tailed Kite, in the western countys [sic]. Have been told that it used to occur in numbers in Yancy & Mitchell. Have observed it twice on Elk Mtn. both times in August."

In addition to these comments, Cairns later provided evidence that he possessed a specimen of the kite, although he gave no details concerning its origin. On 31 October 1888, Cairns inquired from Brewster:

> "Can large mounted birds be taken down and turned into skins without injury. I have a number of mounted specimens that I wish to take down, among them are . . . Swallow-tailed Kite . . . ."

Cairns' tragic death in 1895 brought an abrupt end to field ornithology in western North Carolina. Subsequently there have been only two sightings of the species in the Appalachian region, both within the past 20 years. Sprunt (1954) reported W. L. Pressley's observation of a single kite at High Hampton, Jackson County, on 17 October 1953. More recently, Norme D Frost (pers. com.) reported the sighting of a pair of kites by Mr. and Mrs. Paul G. Smith and Mrs. Sylvia Dodge near Tryon, Polk County, N. C. on 18 July 1968.

DISCUSSION

An examination of the above data suggests that the Swallow-tailed Kite may have formerly occurred as a fairly regular and not uncommon species in the Appalachian region of North Carolina during the late summer and early autumn months. Prior to 1860, Gregg reported seeing "*many*" of the birds in late July [italics mine], and he mentioned that a local hunter had informed him of their being "seen in that vicinity every summer." Cairns' papers likewise indicated that the bird was of regular occurrence in Buncombe County during the period of August through October, and he mentioned having "been told that it used to occur in numbers in Yancy & Mitchell." Gregg's report might be challenged as an isolated incident, and the second-hand reports mentioned by Gregg and Cairns certainly do not carry the weight of original observations. It is also unfortunate that the reports do not give specific dates, numbers, elevations, localities, and direction of movement, as such data would be invaluable in assessing the true extent of the species' occurrence in the Appalachians. Nevertheless, Cairns' studies during the period 1885 to 1895 indicated that the species occurred fairly regularly every year during the late summer and early autumn.

It is interesting to examine these records in light of the decline of the species as a breeding bird in the interior Mississippi basin. According to Roberts (1932) this decline became noticeable around 1880, with the species virtually disappearing by 1900. Gregg's observations suggest that the species may have occurred in moderate numbers prior to the 1860s, and Cairns' correspondence with Brewster indicated that the bird used to "occur in numbers" in the area in earlier times. During the decade 1885-1895, Cairns regarded the bird as a regular fall transient but never found evidence of the larger concentrations mentioned by his friends or by Gregg. Furthermore, his final writing on the region (1894) lists the species as "Rare," suggesting that the bird may have declined noticeably during the 10-year period of his observations. Following his death, the species was not again reported from the Appalachians until 1953, during which period the kite was virtually absent from the Mississippi basin. Interestingly, the first modern record of the species from the North Carolina mountains followed its recurrence in the north central states, where Gunderson (1950) reported three individuals at different localities in Minnesota during August and October 1950, these sightings being the first in the region since the early 1920s. The data suggest, therefore, that the Swallow-tailed Kite's occurrence in the southern Appalachians has closely paralleled its population status in the Mississippi valley, with the species being fairly regular in both localities and declining sharply in both regions by the turn of the century.

The major question raised by these records concerns the nature of the migratory movement involved. Two possibilities exist to explain the origin of the individuals reported from the Appalachian region: (1) southward migration of adults, juveniles, or birds of both age groups from breeding grounds in the interior Mississippi basin or (2) northward postbreeding dispersal of adults, juveniles, or birds of both age groups from the southeastern coastal population. From the outset, it should be apparent that these two hypotheses are not mutually exclusive, and both factors may be involved in the appearance of the birds in the mountains of the state. However, the remarkable parallel between the status of the bird in the Mississippi basin and its frequency of occurrence in the Appalachians strongly suggests that the reports of Gregg and Cairns involved individuals heading *south* across the mountains from the interior Mississippi River valley. Furthermore, Ralph S. Palmer (pers. com.) informs me that there appears to be a fairly extensive postbreeding dispersal to the N, NE, and W beginning in late June, with the true southward migration extending from mid-July through late September. The relatively late nature of the records from the Appalachians, coming primarily from August through October, suggests that the birds seen in the region represent south-bound individuals from the interior population of the upper Mississippi basin, rather than individuals dispersing northward. Furthermore, the absence of the bird in the mountains from 1895 to 1953 is difficult to explain on the basis of northward dispersal, because the southeastern coastal population has maintained itself throughout this period, albeit in reduced numbers. The most likely explanation, therefore, is that during the autumn months of the 1800s, the Swallow-tailed Kite migrated southward across the southern Appalachians from its breeding sites in the interior Mississippi River valley. In spite of the attractiveness of this hypothesis, however, the evidence is mostly circumstantial; and the exact nature and extent of the species' occurrence in the mountain region may never be determined satisfactorily.

Although only three Swallow-tailed Kites have been noted in the mountain region during the past 20 years, these records combined with recent reports from the upper Mississippi valley should alert bird students to the possibility of additional sightings in the southern Appalachians. Such observations, if forthcoming, might provide useful information concerning the migratory movement of the species in the Appalachians.

SUMMARY

Prior to 1900 the Swallow-tailed Kite apparently occurred fairly regularly in portions of western North Carolina during the late summer and early autumn months, although the species has been noted on only two occasions since the turn of the century. An apparent correlation between the species' abundance in the upper Mississippi valley and its occurrence in the southern Appalachians indicates the probability of a southward migration across the mountains by individuals nesting in the north-central portion of the United States.

ACKNOWLEDGMENTS

I am indebted to Ralph S. Palmer for migratory data on the species, to Norme D Frost for permission to publish his records, and to the Museum of Comparative Zoology for permission to quote from the Cairns-Brewster collection.

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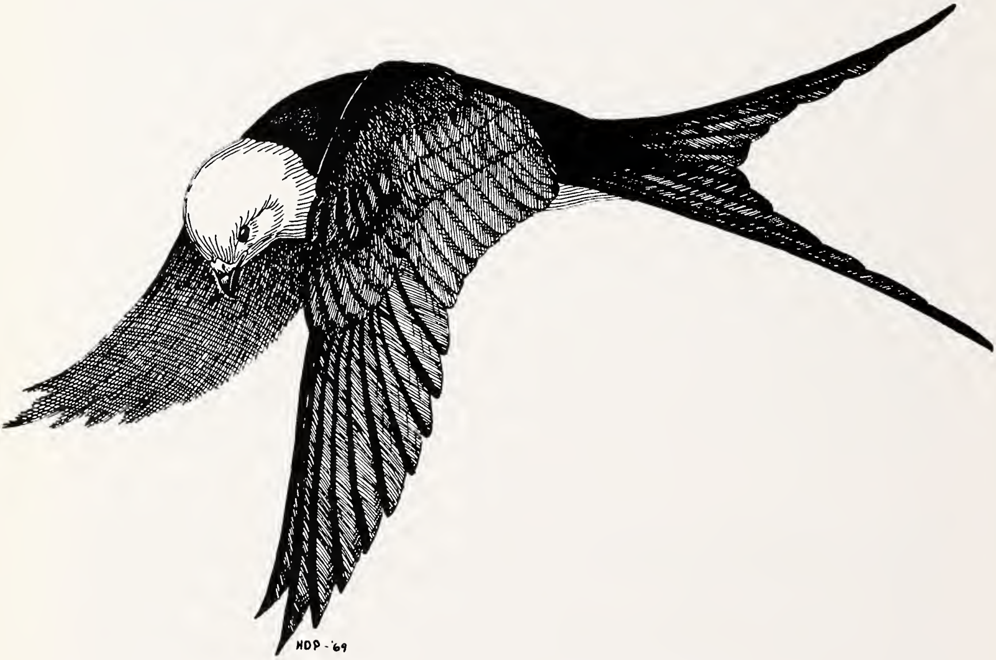
SPRUNT, A., Jr. 1954. Swallow-tailed Kite in mountains. Chat, 18:25.

P. O. Box 167, Statesville, N. C., 25 September 1971



CBC Roundtable

Further Comments on Birds' Feeding at Night

Gilbert Grant reports in response to remarks in March 1972 *Chat* (36:12) that he saw Sanderlings feeding at night by full moon on 4 September 1968 and in light of fishing piers on 23 August 1969 at Topsail Island, N. C. Black Skimmers also feed at night, but they have special "pupil" muscles. Zusi did a paper on them.

CBC History

Beginning with the June 1972 issue, *Wildlife in North Carolina* featured a four-part series of articles on the history of Carolina Bird Club written by Charlotte Hilton Green, a charter member and past president of the club. An earlier issue carried an article about another CBC member, Elizabeth B. Clarkson of Charlotte. *Wildlife* almost always has several items of particular interest to the naturalist in addition to material on hunting and fishing. If you don't read it regularly, you are missing a treat!

Request for Data

Recent sight records of Painted Buntings in spring from scattered localities in the piedmont of North and South Carolina suggest that the species may be more than accidental in this section of the Carolinas. Please report any sightings of Painted Buntings in piedmont North or South Carolina to me for publication in *Chat.* Indicate dates of sightings, sex of birds, behavior, and habitat. Address reports to Miss Jane P. Holt, Dept. of Biology, Presbyterian College, Clinton, S. C. 29325.

1971 Christmas Bird Count: A Correction and a Confirmation

Compiler Frances Needham reports that the 19 Glossy Ibis listed for Wilmington in the 1971 Christmas Bird Count table (*Chat,* 36:14) should be White Ibis. Please correct your copy.

Several club members have questioned the 28 Grasshopper Sparrows reported on the Yancey-McDowell count. Although the species has previously been recorded in several mountain localities, the large number of birds invites skepticism. Joseph Hall, leader of the field party that found the birds, has written a detailed report that is summarized below.

The Grasshopper Sparrows were found on 18 December 1971 in four different places. In a field near Lake Tahoma three were flushed and observed while perched and in flight. The flat head and light stripe on top of the head were noted. Two more were on a fence wire near Celo, and three were in a field between Pleasant Gardens and Marion along Hwy 80. The main group of at least 20 individuals was found in a 6-acre field of tall weeds. We watched the birds feeding undisturbed for about 25 minutes, during which time we were able to compare the Grasshopper Sparrows with Savannah, Field, White-throated, and Song Sparrows. The Savannahs were in short grass along the edge of the field, but the Grasshoppers were spread out over the entire field and didn't seem to associate with each other except for some groups of two or three birds. The presence of such a large number of Grasshopper Sparrows in a relatively small area during December is probably related to the unusually warm weather that prevailed until the night before the count day.

Institute for the Study of Bird Populations

Steve Fretwell, formerly a graduate student at N. C. State University and now an assistant professor in the Division of Biology at Kansas State University, is in the process of forming an Institute for bird population studies. Patterned after the British Trust for Ornithology, the Institute will offer financial support for appropriate graduate and post-doctoral research, analyze population data gathered by amateur bird students, and popularize the work of professional ornithologists. Dr. Fretwell maintains that we cannot adequately protect bird populations if we do not know what causes their fluctuations. He holds a Ph. D. in Theoretical Ecology and Biomathematics, and the basis for his work is being published in a monograph by the Princeton University Press. Anyone interested in obtaining further information about the Institute (annual membership $5 per person) should write Dr. Steve Fretwell, Division of Biology, Kansas State University, Manhattan, Kansas 66502.

PROTECT
OSPREYS

Photo by
Gil and Jo Fernandez

Osprey Conference

Proceedings of the recent North American Osprey Research Conference are now in preparation, and copies may be reserved by writing Dr. Mitchell A. Byrd, Department of Biology, College of William and Mary, Williamsburg, Virginia 23185. Sale price is expected to be no more than $2.00. Also available from Dr. Byrd are postcards featuring the head of an Osprey and small stickers bearing the photograph reproduced above along with the slogan PROTECT OSPREYS. CBC members will recall Dr. Byrd as the guest speaker at the Nags Head meeting in the fall in 1971.

The Osprey Conference took place last February, and Dr. Byrd served as host and chairman. Reports on the status of this endangered species came from Canada and Mexico as well as all sections of the United States. One highlight of the meeting was a report by Alexander Sprunt IV of the National Audubon Society, who described sightings of Ospreys and nest locations in eastern coastal regions of Mexico, the Yucatan, and Belize. Hitherto virtually unknown, these may comprise a resident race comparable to the birds of southern Florida.

Conservation

. . . with Marie Mellinger

The Ravaging of a River

The Proposal to put the Chattooga River under the Wild and Scenic River Act met with almost overwhelming approval at hearings held in the three states bordering the river. Impact studies on the river have been completed, and it remains for the Legislatures of Georgia, South Carolina, and North Carolina to approve the act. It may take as long as two years before the final law is signed.

Meanwhile, what is happening to the river? It is being silted and polluted, the natural resources of the river and its tributaries are fast disappearing, and nobody seems to care. Dirt is pouring into the river from Stecoa Creek, Dick's Creek, Cliff Creek, Overflow Creek, Sara's Creek and many more. Almost every tributary stream on the Georgia side of the river is running full of mud. Dirt is pouring off Screamer Mountain, flowing from an elite country club, a proposed shopping center, a new fried chicken joint, and countless more. Developments creep ever closer to the main river. Logging and clear-cutting are denuding the tributary streams. Ghosts of the Cherokees and pioneers should rise in protest as roads are bull-dozed across old village sites, mine sites, and historical areas. The river is being turned into a Roman Circus of movie making, raft floats, and camp-outs. Twenty-two large bags of trash and litter were picked up at the highway 76 bridge in one day.

And nobody seems to care. Who cares if the last of the ladyslippers are offered for sale in the market bulletin? Who cares about the Golden Eagle, shot, and carelessly mounted, displayed in a local grocery store? Who cares if 40 herpetologists gathered for a meeting at Highlands each collects 40 salamanders of each species? Of what use is a salamander, anyhow? Who cares if the last vestiges of ginseng and golden seal are destroyed by clear-cutting. Who cares if a botanist collects all the mad-dog skullcap for his thesis? Who cares if all the water snakes are killed off?

Think about what is happening to one of the last free flowing, unencumbered rivers in eastern North America! A river having its beginnings in springs and small trickling rills high in the mountains, flowing for 40 miles through gorges and over rocks, under laurel slicks and the last lingering remnants of the once primeval white-pine hemlock forest.

Listen to the spirit of the river-
"Mine is the voice of the wailing wind,
My sigh is the softness of greening fern,
My spirit soars in the hawk's high flight
Where the fiery colors of autumn burn.
Forever I live in a granite crag,
Or dance in a brief-lived mayfly hour,
My thunder and lightning can threaten the stars,
My touch can caress a fragile flower.
I live in each shining fungus face
That spring's newborn from the forest sod,
I rage like a demon in waters white
Or softly whisper a prayer to God."

Are we going to continue to ravage the Chattooga River?

SPRING BIRD COUNT 1972	Total Individuals	COAST				COASTAL PLAIN						PIEDMONT												MTN.		
		Bodie-Pea Island, N. C. 10 May	Morehead City, N. C. 23 April	Wilmington, N. C. 29 April	Charleston, S. C. 23 April	Beaufort Co., N. C. 7 May	Pamlico Co., N. C. 30 April	Rocky Mount, N. C. 14 May	Southern Pines, N. C. 30 April	Fayetteville, N. C. 5 May	Dillon, S. C. 6 May	Roanoke Rapids, N. C. 22 April	Henderson, N. C. 29 April	Raleigh, N. C. 29 April	Chapel Hill, N. C. 30 April	Greensboro, N. C. 29 April	Winston-Salem, N. C. 29 April	Statesville, N. C. 30 April	Stanley Co., N. C. 29 April	Charlotte, N. C. 6 May	Greenville, S. C. 6 May	Elkin-Ronda, N. C. 6 May	Caldwell Co., N. C. 29 April	Avery Co., N. C. 9 May	Yancey-McDowell Co., N. C. 22 April	Buncombe Co., N. C. 29 April
Common Loon	99	5	68	9	—	—	—	—	—	—	—	4	1	1	—	6	—	—	3	—	—	—	—	—	1	1
Red-throated Loon	3	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Horned Grebe	17	1	2	10	1	—	1	—	—	—	—	*	—	2	—	—	—	—	—	—	—	—	—	—	—	—
Pied-billed Grebe	31	—	10	6	1	—	2	—	3	—	*	2	—	—	—	3	—	—	—	—	—	—	1	—	3	—
Wilson's Petrel	*	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White Pelican	3	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Brown Pelican	12	—	2	1	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gannet	9	7	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Double-cr. Cormorant	906	167	630	90	7	8	4	—	—	—	—	*	—	*	—	—	—	—	—	—	—	—	—	—	—	—
Anhinga	13	—	—	6	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Blue Heron	90	1	4	44	15	—	3	1	—	—	*	8	—	1	2	2	1	1	5	—	—	1	—	—	1	—
Green Heron	130	7	6	54	3	3	5	2	3	4	—	4	—	6	2	7	6	2	5	3	1	3	—	—	2	2
Little Blue Heron	122	14	70	21	10	*	—	—	—	—	—	—	—	—	—	2	—	—	4	—	—	1	—	—	—	—
Cattle Egret	281	12	199	14	4	6	18	3	—	*	—	15	—	10	—	—	—	—	—	—	—	—	—	—	—	—
Common Egret	282	16	168	71	26	1	—	—	—	—	—	*	—	*	—	—	*	—	—	—	—	—	—	—	—	—
Snowy Egret	339	65	86	177	5	—	6	—	—	—	—	*	—	*	*	—	—	—	—	—	—	—	—	—	—	—
Louisiana Heron	145	18	90	30	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-cr. Night Heron	25	12	10	3	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—
Yellow-cr. Night Heron	18	2	*	12	4	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—
Least Bittern	13	—	1	10	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
American Bitten	18	1	4	5	—	—	1	—	1	—	—	3	—	3	—	—	—	—	—	—	—	—	—	—	—	—
Glossy Ibis	591	95	165	295	11	—	25	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White Ibis	74	—	5	4	65	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Canada Goose	139	30	—	8	—	—	—	1	—	—	—	2	—	4	—	1	87	1	—	5	—	—	—	—	—	—
Snow Goose	6	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mallard	193	2	*	9	—	12	2	2	1	17	—	14	—	7	2	38	40	—	6	5	—	—	—	—	10	26
Black Duck	81	69	6	—	—	—	—	—	—	—	—	3	—	—	—	1	—	2	—	—	—	—	—	—	—	—
Gadwall	179	179	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pintail	4	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—
Green-winged Teal	89	47	40	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blue-winged Teal	316	35	201	54	1	—	—	—	—	—	—	10	—	1	—	—	—	—	7	—	—	—	—	—	5	2
American Widgeon	4	2	*	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	2	—
Shoveler	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wood Duck	226	—	9	62	15	26	2	4	12	—	6	22	—	22	8	4	11	1	9	6	—	6	—	—	1	—
Redhead	7	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—
Ring-necked Duck	140	—	1	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	136	—
Canvasback	*	—	—	—	—	*	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Greater Scaup	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—
Lesser Scaup	74	—	—	53	—	—	—	—	—	—	—	4	—	1	1	7	—	—	1	—	—	—	—	—	7	—
Scaup (sp. ?)	39	1	30	—	6	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—
Bufflehead	15	—	3	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	9	—
Surf Scoter	13	—	—	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Scoter	115	15	80	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Ruddy Duck	26	—	14	—	—	—	—	—	—	—	—	—	—	12	—	—	—	—	—	—	—	—	—	—	*	—
Hooded Merganser	8	—	—	1	—	—	—	—	—	—	—	4	—	—	—	—	—	3	—	—	—	—	—	—	—	—
Common Merganser	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—
Red-breasted Merganser	285	13	17	159	—	—	—	—	—	—	—	56	—	2	—	1	—	—	36	—	—	—	—	—	1	—
Turkey Vulture	129	—	—	17	23	—	—	5	2	1	*	10	—	3	8	7	6	2	30	—	—	—	—	—	9	6
Black Vulture	31	—	1	—	13	—	—	1	2	—	—	5	—	—	—	2	—	3	4	—	—	—	—	—	—	—
Swallow-tailed Kite	3	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sharp-shinned Hawk	7	—	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	2	—	—	—
Cooper's Hawk	9	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	2	2
Red-tailed Hawk	77	—	1	2	4	—	1	1	6	3	1	5	1	5	9	10	5	4	2	4	—	—	—	—	4	9
Red-shouldered Hawk	33	—	6	2	10	—	—	—	—	—	—	*	3	2	3	—	1	2	1	2	—	—	—	—	1	—
Broad-winged Hawk	17	—	—	—	—	—	—	—	2	—	1	—	—	*	*	1	3	—	1	1	—	1	—	1	1	5
Bald Eagle	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Marsh Hawk	7	1	—	—	—	—	—	—	—	1	—	—	—	*	*	—	1	3	1	—	—	—	—	—	—	—
Osprey	84	1	6	49	5	—	6	—	—	—	*	4	—	2	*	2	*	1	4	—	—	—	—	—	4	—
Peregrine Falcon	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pigeon Hawk	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sparrow Hawk	21	2	2	2	—	—	—	—	—	1	—	*	—	—	—	—	4	2	1	1	—	—	—	—	*	6
Ruffed Grouse	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	7
Bobwhite	1071	2	42	211	6	54	23	47	10	47	26	57	14	46	67	83	79	29	107	46	4	22	21	—	7	21
Ring-necked Pheasant	11	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Turkey	3	—	*	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	*	—
King Rail	6	2	2	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Clapper Rail	56	7	15	31	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Virginia Rail	5	—	—	3	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sora	27	4	16	3	—	—	—	—	—	—	—	2	—	2	—	—	—	—	—	—	—	—	—	—	—	—
Black Rail	2	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Purple Gallinule	1	—	*	1	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Gallinule	20	*	2	8	10	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Coot	488	39	116	97	90	1	1	4	—	2	—	8	1	64	—	4	6	—	42	1	—	—	—	—	12	—
American Oystercatcher	326	17	104	137	68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Semipalmated Plover	1129	935	60	121	10	—	1	—	—	—	—	*	—	—	*	—	2	—	—	—	—	—	—	—	—	—
Piping Plover	22	20	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wilson's Plover	69	3	4	55	7	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Killdeer	113	—	*	1	—	—	1	5	—	2	*	—	—	1	4	16	18	5	41	6	2	3	—	—	1	4
Am. Golden Plover	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-bellied Plover	461	230	80	141	10	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—
Ruddy Turnstone	188	163	6	18	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Woodcock	14	1	—	1	—	1	—	—	—	—	—	—	—	1	1	3	1	1	2	—	—	1	—	—	—	—
Common Snipe	79	6	8	4	—	3	1	—	—	—	—	48	—	1	—	—	4	—	3	—	—	—	—	—	1	—
Whimbrel	94	4	32	57	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Upland Plover	3	—	2	—	—	—	—	—	7	—	—	1	—	*	—	—	—	—	—	—	—	—	—	—	—	—
Spotted Sandpiper	94	5	2	8	—	4	1	3	5	2	9	*	2	10	1	9	8	4	4	5	—	5	—	—	4	1
Solitary Sandpiper	63	7	*	1	—	—	—	—	—	1	6	5	1	9	1	2	13	1	2	—	—	2	—	—	7	—
Willet	574	128	172	220	54	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Greater Yellowlegs	208	148	4	25	2	—	15	—	1	—	—	5	—	2	—	—	1	—	—	—	—	—	3	—	—	—
Lesser Yellowlegs	446	183	50	179	3	—	4	2	—	—	—	10	—	6	—	2	6	—	—	—	—	—	—	—	—	—
Yellowlegs (sp. ?)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—
Knot	108	71	36	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pectoral Sandpiper	56	2	1	30	—	—	6	—	1	—	—	10	—	*	—	—	4	2	—	—	—	—	—	—	—	—
White-rumped Sandpiper	34	33	*	1	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—
Least Sandpiper	2154	1850	29	234	7	8	4	—	6	—	3	*	—	11	*	—	1	—	—	1	—	—	—	—	—	—
Dunlin	2055	225	1100	729	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Short-billed Dowitcher	2986	1690	502	793	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Long-billed Dowitcher	*	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dowitcher (sp. ?)	2	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

SPRING BIRD COUNT 1972	Total Individuals	COAST				COASTAL PLAIN						PIEDMONT												MTN.		
		Bodie-Pea Island, N. C. 10 May	Morehead City, N. C. 23 April	Wilmington, N. C. 29 April	Charleston, S. C. 23 April	Beaufort Co., N. C. 7 May	Pamlico Co., N. C. 30 April	Rocky Mount, N. C. 14 May	Southern Pines, N. C. 30 April	Fayetteville, N. C. 5 May	Dillon, S. C. 6 May	Roanoke Rapids, N. C. 22 April	Henderson, N. C. 29 April	Raleigh, N. C. 29 April	Chapel Hill, N. C. 30 April	Greensboro, N. C. 29 April	Winston-Salem, N. C. 29 April	Statesville, N. C. 30 April	Stanley Co., N. C. 29 April	Charlotte, N. C. 6 May	Greenville, S. C. 6 May	Elkin-Ronda, N. C. 6 May	Caldwell Co., N. C. 29 April	Avery Co., N. C. 9 May	Yancey-McDowell Co., N. C. 22 April	Buncombe Co., N. C. 29 April
Stilt Sandpiper	6	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Semipalmated Sandpiper	8880	8700	150	19	10	—	—	—	—	—	—	*	—	1	*	—	—	—	—	—	—	—	—	—	—	—
Western Sandpiper	318	265	18	10	25	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—
Marbled Godwit	12	—	—	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sanderling	354	135	108	106	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Avocet	13	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-necked Stilt	40	34	*	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Northern Phalarope	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Jaeger (sp. ?)	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Black-backed Gull	62	46	3	—	—	—	13	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—
Herring Gull	1834	590	530	690	6	—	—	—	—	—	—	6	—	*	—	—	—	—	12	—	—	—	—	—	—	—
Ring-billed Gull	1760	6	340	888	11	19	25	2	—	—	—	275	19	*	—	100	*	—	75	—	—	—	—	—	—	—
Laughing Gull	3050	735	1,685	323	57	54	194	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bonaparte's Gull	86	3	2	34	—	—	—	—	—	—	—	26	12	1	—	3	*	—	5	—	—	—	—	—	—	—
Gull-billed Tern	105	20	35	49	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forster's Tern	17	4	*	11	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Tern	800	580	132	55	29	3	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Tern	752	85	194	440	30	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Royal Tern	666	62	290	301	2	3	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sandwich Tern	36	4	30	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Caspian Tern	35	2	15	13	3	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—
Black Tern	*	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black Skimmer	1511	1	878	572	60	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rock Dove	801	—	53	115	—	10	—	63	2	16	19	14	50	27	*	195	25	7	38	91	—	2	8	—	53	13
Mourning Dove	2911	22	94	198	13	55	17	102	112	52	75	104	34	394	144	253	569	45	145	131	10	51	99	5	16	171
Ground Dove	9	—	—	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow-billed Cuckoo	80	—	2	2	41	2	—	1	—	2	—	3	—	1	5	3	2	7	2	2	—	3	—	—	*	2
Black-billed Cuckoo	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	*
Barn Owl	6	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	3	—	—	—	—
Screech Owl	19	—	2	3	—	—	—	—	1	—	—	2	—	3	4	—	1	—	—	1	—	—	2	—	—	—
Great Horned Owl	17	—	1	1	—	—	—	1	—	—	—	3	—	2	5	—	3	—	1	—	—	—	—	—	—	—
Barred Owl	31	—	1	2	1	—	—	1	1	1	—	14	—	4	—	—	1	—	4	—	—	1	—	—	—	—
Chuck-will's-widow	52	1	7	15	—	—	7	—	6	2	*	4	—	5	—	2	—	—	3	—	—	—	—	—	—	—
Whip-poor-will	81	—	—	1	—	—	—	—	3	—	—	2	1	16	17	1	2	7	14	2	—	2	3	2	2	6
Common Nighthawk	59	—	4	23	—	*	3	11	2	3	*	*	—	1	1	4	2	3	—	—	—	—	2	—	—	—
Chimney Swift	904	6	48	21	8	54	10	26	22	27	36	72	8	7	24	87	160	11	55	61	12	20	21	—	65	43
Ruby-th. Hummingbird	159	*	2	7	21	10	*	—	4	3	1	12	2	3	14	10	16	2	11	5	—	1	3	1	—	31
Belted Kingfisher	104	2	5	11	3	1	3	1	3	3	2	6	—	6	12	13	8	2	3	1	—	1	1	—	11	6
Yellow-shafted Flicker	609	1	32	50	4	17	10	18	6	12	5	24	13	36	17	98	47	3	36	14	3	10	22	6	28	97
Pileated Woodpecker	106	—	5	5	30	5	2	—	5	1	3	12	—	2	1	3	1	4	2	1	1	2	1	1	7	12
Red-bellied Woodpecker	494	—	13	20	29	18	3	4	18	8	7	27	13	56	47	81	56	7	30	25	3	9	3	—	2	15
Red-headed Woodpecker	186	—	18	31	10	35	5	2	9	10	*	3	2	1	7	30	4	1	10	3	2	—	—	—	—	3
Yellow-bellied Sapsucker	33	—	—	2	—	—	—	—	—	—	—	*	—	—	2	2	5	—	10	—	—	—	—	6	1	5

Hairy Woodpecker	62	—	1	2	—	1	—	—	1	2	3	7	—	1	8	3	9	3	2	—	1	1	1	4	1	11
Downy Woodpecker	276	—	5	8	2	5	1	1	8	2	2	26	5	11	32	42	27	5	23	6	3	3	5	2	12	40
Red-cockaded Woodpecker	16	—	2	2	4	6	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern Kingbird	294	28	27	14	8	34	9	5	11	7	16	17	2	18	5	30	17	6	8	16	2	4	—	—	2	8
Gray Kingbird	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Crested Flycatcher	514	9	72	80	82	27	18	12	17	17	3	31	6	25	9	35	23	3	8	16	4	2	2	—	3	10
Eastern Phoebe	176	—	—	1	—	—	3	6	3	—	*	2	9	7	14	23	12	12	6	5	4	4	4	—	18	43
Yellow-bellied Flycatcher	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	2	—	*
Acadian Flycatcher	131	—	7	14	9	8	—	—	4	7	1	4	—	20	18	1	4	5	3	26	—	—	—	—	—	—
Traill's Flycatcher	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Flycatcher	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	2	—
Eastern Wood Pewee	156	—	*	4	23	16	10	9	2	4	—	*	—	2	16	8	15	4	5	10	3	3	2	—	5	15
Horned Lark	38	—	—	—	—	—	—	8	2	—	—	6	2	*	—	4	6	6	4	—	—	—	—	—	—	—
Tree Swallow	569	7	1	337	94	2	4	—	12	—	—	43	—	23	*	33	5	1	6	1	—	—	—	—	—	*
Bank Swallow	98	5	—	3	19	—	—	—	*	—	—	13	—	*	—	—	2	—	36	—	—	—	—	20	—	—
Rough-winged Swallow	693	—	72	17	—	3	4	210	4	2	5	18	7	32	3	12	45	7	10	6	—	6	8	—	180	42
Barn Swallow	2132	196	77	441	—	111	41	83	34	12	2	50	1	93	10	42	59	30	305	16	10	6	65	15	322	111
Cliff Swallow	54	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	50	2	—	—	—	—	—	—
Purple Martin	1184	7	53	134	3	404	98	32	20	4	11	2	6	16	25	61	66	—	208	—	6	12	14	—	—	2
Blue Jay	2168	1	47	133	47	55	18	26	45	61	44	29	63	113	106	441	157	33	221	86	15	28	62	15	61	261
Common Raven	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Common Crow	1074	2	42	26	42	1	—	11	—	24	12	33	11	55	54	126	62	52	87	30	14	61	12	13	80	224
Fish Crow	338	85	70	89	11	45	6	—	12	—	—	11	—	9	—	—	—	—	—	—	—	—	—	—	—	—
Carolina Chickadee	1060	1	24	38	71	32	7	5	16	7	2	53	11	78	95	114	78	61	107	35	6	14	9	14	31	151
Tufted Titmouse	929	—	14	41	44	20	7	9	1	16	13	49	9	63	78	109	69	11	69	42	7	7	11	18	50	157
White-breasted Nuthatch	178	—	—	—	—	4	—	3	2	—	*	4	—	2	19	25	29	3	24	1	—	1	1	12	4	44
Red-breasted Nuthatch	6	1	—	—	—	—	—	—	—	—	—	—	—	2	*	—	1	—	—	—	—	—	—	—	2	*
Brown-headed Nuthatch	222	—	4	16	37	5	—	2	10	8	4	3	4	13	24	48	17	—	16	7	2	1	—	—	—	1
Brown Creeper	5	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	*	—	1	—	—	—	—	2	1	—
House Wren	164	—	1	—	—	—	—	—	1	—	*	12	10	21	3	28	16	2	24	3	—	1	13	—	2	27
Winter Wren	7	—	—	—	2	—	—	—	—	—	—	*	—	—	—	—	—	1	—	—	—	—	—	—	4	—
Carolina Wren	822	10	23	78	31	20	3	12	13	26	10	45	9	80	74	85	44	20	70	36	7	13	19	4	18	72
Long-billed Marsh Wren	45	5	16	19	—	—	—	—	1	—	—	4	—	*	—	—	—	—	—	—	—	—	—	—	—	—
Short-billed Marsh Wren	4	—	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mockingbird	1794	15	101	153	30	51	16	41	57	53	47	19	51	105	87	282	172	58	196	103	10	14	25	—	23	85
Catbird	689	63	7	54	5	18	1	9	25	15	5	7	34	45	21	57	63	5	99	27	2	11	15	12	5	84
Brown Thrasher	836	9	15	74	27	45	3	14	17	31	26	58	22	47	15	63	42	20	169	27	5	11	25	3	15	53
Robin	2789	—	4	64	—	65	8	317	41	48	42	19	87	317	103	471	212	55	219	86	10	27	105	26	134	329
Wood Thrush	1033	—	5	15	7	12	5	17	5	30	13	79	19	85	76	197	111	36	148	36	5	23	18	8	22	61
Hermit Thrush	18	—	4	1	2	2	—	—	1	—	—	—	—	—	—	—	2	1	—	—	—	—	—	—	2	3
Swainson's Thrush	20	—	—	—	—	—	—	—	2	—	—	1	—	2	6	—	6	—	—	1	1	—	—	1	—	*
Gray-cheeked Thrush	6	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	3	1	—	—	—	—	—	—	1	—
Veery	14	—	—	—	1	—	—	—	1	—	—	1	—	6	*	2	1	—	—	—	—	—	—	1	1	—
Eastern Bluebird	457	—	4	3	4	9	2	9	12	6	—	14	3	10	64	30	39	7	135	5	5	10	16	1	19	50
Blue-gray Gnatcatcher	793	1	61	12	148	4	6	2	25	4	5	138	5	94	94	14	40	34	19	33	—	3	—	—	22	29
Golden-crowned Kinglet	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	—
Ruby-crowned Kinglet	49	—	—	—	6	—	—	—	1	—	—	11	1	9	1	6	8	—	3	1	—	—	—	1	—	1
Water Pipit	16	1	—	—	—	—	—	—	—	—	—	5	—	*	—	—	3	6	1	—	—	—	—	—	—	—
Cedar Waxwing	679	185	79	84	—	*	4	—	—	30	4	27	—	88	7	77	19	8	46	3	—	—	—	—	7	11
Loggerhead Shrike	155	—	1	2	2	—	—	19	9	11	*	*	12	7	3	17	5	21	33	8	1	3	1	—	—	—
Starling	5674	30	83	308	6	309	97	450	86	275	61	143	96	272	110	1,093	350	71	419	676	25	52	114	10	86	452
White-eyed Vireo	346	10	35	16	86	5	10	9	12	3	1	69	4	23	25	4	4	1	8	3	—	1	1	—	2	14
Yellow-throated Vireo	109	—	1	2	1	2	3	1	6	2	—	18	1	10	17	12	12	6	2	3	2	4	—	—	2	2
Solitary Vireo	83	—	—	—	5	—	—	—	1	—	—	—	—	2	3	1	6	—	—	—	—	—	—	4	46	15
Red-eyed Vireo	909	—	49	18	58	8	4	12	31	21	2	140	14	147	82	88	54	36	33	23	2	6	3	1	12	65
Philadelphia Vireo	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—

SPRING BIRD COUNT 1972	Total Individuals	COAST				COASTAL PLAIN						PIEDMONT												MTN.		
		Bodie-Pea Island, N. C. 10 May	Morehead City, N. C. 23 April	Wilmington, N. C. 29 April	Charleston, S. C. 23 April	Beaufort Co., N. C. 7 May	Pamlico Co., N. C. 30 April	Rocky Mount, N. C. 14 May	Southern Pines, N. C. 30 April	Fayetteville, N. C. 5 May	Dillon, S. C. 6 May	Roanoke Rapids, N. C. 22 April	Henderson, N. C. 29 April	Raleigh, N. C. 29 April	Chapel Hill, N. C. 30 April	Greensboro, N. C. 29 April	Winston-Salem, N. C. 29 April	Statesville, N. C. 30 April	Stanley Co., N. C. 29 April	Charlotte, N. C. 6 May	Greenville, S. C. 6 May	Elkin-Ronda, N. C. 6 May	Caldwell Co., N. C. 29 April	Avery Co., N. C. 9 May	Yancey-McDowell Co., N. C. 22 April	Buncombe Co., N. C. 29 April
Warbling Vireo	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	3	—
Black-and-white Warbler	278	—	3	4	1	—	—	—	14	8	—	39	2	35	21	7	18	17	2	9	—	—	—	3	39	56
Prothonotary Warbler	196	—	44	12	14	2	2	1	9	4	7	58	—	5	12	1	4	—	11	8	—	—	—	—	2	—
Swainson's Warbler	16	—	5	5	1	—	—	—	1	—	1	2	—	—	—	—	*	—	—	—	—	—	—	—	—	1
Worm-eating Warbler	34	—	9	—	—	—	—	—	1	—	—	—	—	1	—	1	4	2	—	—	—	—	—	—	3	13
Golden-winged Warbler	10	—	—	—	—	—	—	—	—	—	—	1	—	*	—	—	—	—	—	—	—	—	—	—	—	9
Blue-winged Warbler	10	—	—	—	—	—	—	—	1	—	—	3	—	1	2	—	—	—	—	—	—	2	—	—	—	1
Brewster's (hybrid)	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Lawrence's (hybrid)	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Tennessee Warbler	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	4	—	—	—	—	—	—	—	—
Orange-crowned Warbler	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	*
Nashville Warbler	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Parula Warbler	498	—	39	118	122	21	5	2	11	9	2	43	3	53	27	9	12	8	1	3	—	—	—	—	5	5
Yellow Warbler	124	2	—	3	1	—	—	—	1	1	2	7	—	7	7	10	9	7	—	3	3	—	3	—	7	51
Magnolia Warbler	15	—	—	—	—	—	—	—	—	2	—	*	—	*	*	—	2	—	—	—	—	5	—	—	4	2
Cape May Warbler	92	—	—	—	—	—	—	—	—	2	—	*	—	1	2	3	53	—	—	7	—	1	1	—	5	17
Black-th. Blue Warbler	169	—	—	1	1	2	—	1	5	3	—	4	—	21	29	12	27	4	1	3	—	2	—	12	28	13
Myrtle Warbler	1389	1	35	41	13	—	—	—	33	16	9	411	19	138	174	116	102	26	58	14	4	1	4	6	59	109
Black-th. Green Warbler	83	—	16	1	27	—	—	—	—	—	—	2	—	1	2	1	7	—	—	1	2	—	—	2	11	10
Cerulean Warbler	2	—	—	—	—	—	—	—	—	—	—	*	1	—	—	—	*	—	—	—	—	—	—	—	—	1
Blackburnian Warbler	18	—	—	—	1	—	—	—	—	—	—	—	—	*	—	—	1	—	—	—	—	—	—	1	8	7
Yellow-throated Warbler	277	—	5	93	58	8	2	—	8	2	1	11	3	25	20	3	11	—	—	2	1	1	—	—	20	3
Chestnut-sided Warbler	59	—	—	—	1	—	—	—	—	—	—	*	—	*	—	2	3	—	1	—	2	2	—	11	9	28
Bay-breasted Warbler	3	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	*	—	—	—	—	—	—	—	—	2
Blackpoll Warbler	67	—	*	1	1	8	—	11	1	1	—	*	—	2	*	1	4	3	—	12	—	11	—	—	—	11
Pine Warbler	263	—	12	37	37	2	6	—	16	12	2	3	5	59	17	3	12	4	8	3	—	—	1	—	8	16
Prairie Warbler	322	26	55	20	19	34	28	1	6	5	—	29	4	12	32	7	9	5	11	12	2	—	—	—	5	*
Palm Warbler	24	—	—	—	—	—	—	—	—	—	—	8	—	3	*	—	1	—	—	—	—	1	3	—	—	8
Ovenbird	186	—	5	—	3	9	2	1	12	1	—	2	3	37	7	20	18	7	—	2	2	2	—	—	11	42
Northern Waterthrush	12	—	*	—	2	—	—	—	1	—	—	2	—	2	1	—	1	—	—	1	—	—	—	—	1	1
Louisiana Waterthrush	57	—	—	—	2	—	—	—	1	2	—	9	1	10	8	1	3	3	2	3	—	—	—	—	6	6
Kentucky Warbler	45	—	*	—	2	—	—	—	2	—	—	*	—	3	6	1	5	2	1	2	—	—	—	—	5	16
Mourning Warbler	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
Yellowthroat	545	31	17	40	15	9	18	2	22	13	1	87	2	49	88	43	18	—	7	35	1	4	2	—	4	37
Yellow-breasted Chat	222	12	1	11	1	19	10	1	2	5	—	13	1	18	42	14	6	15	5	14	4	10	2	—	2	14
Hooded Warbler	243	—	20	12	12	5	12	4	17	2	2	23	4	44	13	1	6	8	—	5	—	—	—	—	9	44
Wilson's Warbler	*	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—
Canada Warbler	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	—	3
American Redstart	148	—	*	1	—	1	—	—	8	2	1	24	—	11	29	7	28	2	1	17	1	2	—	—	6	7
House Sparrow	4176	10	56	209	—	203	275	503	85	88	171	83	84	122	61	558	175	60	852	187	10	15	72	25	68	204
Bobolink	202	4	*	1	—	—	—	—	12	4	120	3	—	*	1	14	—	30	5	4	—	1	—	—	—	3
Eastern Meadowlark	1677	23	34	56	7	27	21	21	16	59	10	86	12	94	53	222	132	232	267	103	12	21	60	3	35	71
Red-winged Blackbird	4901	230	475	376	31	82	194	210	42	95	58	277	18	395	29	237	1.560	74	222	92	4	12	25	29	52	82

Orchard Oriole	187	—	18	34	2	23	10	2	19	6	4	14	3	12	2	7	5	3	13	2	—	—	2	—	—	6
Baltimore Oriole	62	4	14	2	—	—	—	—	*	1	*	*	5	2	2	3	2	—	6	2	—	2	—	2	—	15
Rusty Blackbird	59	—	2	2	—	—	—	—	4	—	*	*	—	—	1	13	*	7	4	—	—	—	—	23	1	2
Brewer's Blackbird	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	3
Boat-tailed Grackle	739	120	110	467	42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Grackle	6093	—	327	235	12	434	100	600	104	145	112	376	103	618	152	1,040	212	130	561	128	10	89	105	21	176	303
Brown-headed Cowbird	923	44	54	21	4	28	28	7	14	4	6	97	9	30	58	85	105	21	139	3	4	9	23	26	11	93
Scarlet Tanager	112	1	—	—	—	—	—	—	*	1	—	1	1	8	9	13	9	3	4	2	2	1	—	8	1	48
Summer Tanager	272	—	8	14	35	10	5	3	10	13	11	4	5	37	27	20	17	4	39	5	3	2	—	—	—	—
Cardinal	3432	23	225	189	81	94	27	43	87	79	70	255	67	257	220	343	252	94	494	103	10	67	74	14	101	163
Rose-breasted Grosbeak	43	3	1	—	—	—	—	—	*	—	—	*	—	6	1	1	3	1	1	—	—	—	—	8	4	14
Blue Grosbeak	204	1	*	12	3	3	5	22	5	13	8	*	—	10	20	12	7	11	58	6	3	2	3	—	—	—
Indigo Bunting	378	6	6	18	7	28	5	16	1	13	3	*	3	25	74	13	23	38	33	24	4	13	4	2	—	19
Painted Bunting	98	—	49	42	7	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dickcissel	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—
Evening Grosbeak	719	—	4	*	—	—	10	—	44	7	*	45	29	161	32	53	165	—	104	3	—	6	24	2	*	30
Purple Finch	76	1	3	1	—	—	*	—	—	—	—	5	—	2	*	12	16	—	13	—	—	—	6	2	*	15
Pine Siskin	705	—	—	4	—	1	*	—	52	12	—	6	52	123	9	82	142	—	28	—	—	17	61	—	6	110
American Goldfinch	3619	—	*	91	30	—	10	—	12	28	13	179	269	158	264	1,399	230	97	237	53	12	6	122	10	260	139
Rufous-sided Towhee	1460	30	52	76	32	35	14	12	23	11	26	83	42	131	71	176	101	53	135	62	5	12	23	12	53	190
Savannah Sparrow	429	5	36	24	—	—	2	—	15	1	—	268	—	45	6	4	2	—	—	2	—	—	—	—	12	7
Grasshopper Sparrow	73	—	—	—	—	—	—	—	—	—	—	2	—	12	1	1	1	45	1	5	—	—	2	—	—	3
Le Conte's Sparrow	1	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sharp-tailed Sparrow	16	4	*	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seaside Sparrow	65	21	6	38	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vesper Sparrow	9	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	2	—	5
Bachman's Sparrow	5	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Slate-colored Junco	139	—	—	—	—	—	—	—	—	—	—	*	—	—	—	—	2	3	—	—	—	—	—	40	63	31
Tree Sparrow	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	4
Chipping Sparrow	1207	—	28	8	—	14	6	5	10	9	6	148	40	254	58	130	161	38	133	8	4	2	12	1	14	118
Field Sparrow	637	5	*	4	3	7	6	12	23	7	5	56	9	59	31	55	117	33	42	42	6	12	3	—	21	79
White-crowned Sparrow	10	—	1	—	—	—	—	—	—	—	—	*	—	—	1	2	2	—	—	—	—	—	2	—	—	2
White-throated Sparrow	1865	—	57	47	59	—	1	—	42	6	*	778	39	130	38	179	187	12	63	16	—	6	25	—	38	142
Fox Sparrow	5	—	—	—	1	1	—	—	—	—	—	—	—	—	—	1	—		—	—	—	—	—	2	—	—
Lincoln's Sparrow	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	—
Swamp Sparrow	100	—	5	45	5	—	1	—	5	—	*	20	—	3	2	5	6	—	—	1	—	—	—	—	*	2
Song Sparrow	593	47	22	1	9	—	—	3	—	—	—	4	1	6	2	36	27	18	1	7	2	16	31	20	57	283
Total No. Species	266xx	129	163	182	143	85	90	81	114x	91	64	131	76	137	110	128	138x	108	121	102	59	87	68	57	113	118
Total No. Individuals	116,216	19,266	11,894	13,225	2,562	2,855	1,627	3,139	1,630	1,642	1,185	5,721	1,520	6,000	3,485	9,766	7,157	1,928	7,167	2,819	303	839	1,438	506	2,851	5,691
Field Observers	317	2	8	25	12	6	2	3	5	7	3	8	10	16	35	36	28	7	21	16	4	14	12	4	12	21
Yard Observers	108	0	0	1	0	6	0	3	4	0	3	0	4	0	0	2	5	0	52	2	0	1	9	3	1	12
Field Parties	134	2	6	11	4	3	1	1	2	4	2	5	2	10	18	10	13	3	8	5	2	4	4	1	4	9
Party-hours	1169	30	44	119	31	30	14	15	27	26	13	53	16	60	76	99	109	36	100	38	20	32	40	11	30	100
Party-miles	3444	82	110	436	133	120	76	162	147	172	54	65	20	50	97	307	376	18	213	122	40	66	30	15	227	306

*Seen in count area during count period but not on count day
xPlus one hybrid warbler.
xxTotal does not include hybrids.

SPRING BIRD COUNT — 1972

ELOISE F. POTTER

The 1972 Spring Bird Count in the Carolinas is another record breaker with 266 species and two additional hybrid warblers found in the 25 count areas. Last year 259 species were recorded in 23 localities. Wilmington tallied 182 species, four short of last year's all-time high but still well ahead of second-place Morehead City's 163. Winston-Salem, Raleigh, and Roanoke Rapids listed over 130 species to lead the inland counts; and Buncombe County observers found 118, the best species total yet for their mountain region.

Success of the present census is partly the result of having new or reorganized counts at Bodie-Pea Island, Roanoke Rapids, Statesville, and Yancey-McDowell Counties. On the other hand, excellent coverage is undoubtedly an important factor. With only seven more field observers than last year, the present census had an additional 19 field parties. At Charlotte birders were in the field from 4:00 AM to 9:00 PM, and they were owling around Elkin until 10:00 PM. Weather conditions were generally favorable during the period from the last weekend in April through the first weekend in May when 18 of the 25 counts were made. Only five localities (Rocky Mount, Fayetteville, Roanoke Rapids, Avery County, and Yancey-McDowell) had enough rain to hinder coverage, and only Bodie-Pea Island and Avery County reported unfavorable wind conditions. Temperatures ranged from lows in the mid-40s to highs in the mid-80s, averaging about 55 to 75 degrees F.

Although the Lawrence's hybrid warbler at Southern Pines and the Brewster's at Winston-Salem were excellent finds, the most exciting and difficult to identify bird was the Le Conte's Sparrow at Southern Pines, apparently the first spring record for North Carolina since C. S. Brimley collected one near Raleigh on 21 April 1894. For details please see Compilers' Comments.

COMPILERS' COMMENTS

COAST

BODIE-PEA ISLAND, N. C. (center: 2.4 miles SSE of Bodie Island Lighthouse, excluding part of South Pond on Pea Island and intentionally not covering Roanoke Island).

10 May. *Northern Phalarope* (EL) was a female in breeding plumage seen and heard in flight at close range at a shallow pool on Bodie Island. Six Stilt Sandpipers at Pea Island and five more the day before at Bodie Island were probably not unusual for the area. *White-rumped Sandpipers* were scattered throughout large flocks of Semipalmated Sandpipers on both Bodie and Pea Islands and were more easily identified by call notes than by their white rumps. The two *Yellow-crowned Night Herons* were on nests in pines at Bodie Island. *Pigeon Hawk* (HL) was a female well studied at Pea Island. Land bird count was unusual. The *Blue Jay* at Bodie Island and another the previous day near the U.S.C.G. Station at Pea Island are very rare in this area. No migrant warblers were found on the count, but 15 to 20 *Blackpolls* were found in one hour in mature hardwoods the next day between Kitty Hawk and Duck. Three *Rose-breasted Grosbeaks* and a *Baltimore Oriole* seen the following day near Duck, coupled with those recorded on count day, indicated a definite coastal migration for these species.–EDMUND LeGRAND and HARRY LeGRAND, 331 Yadkin Drive, Raleigh, N. C. 27609.

MOREHEAD CITY (center: same as Christmas count).

23 April. *Purple Gallinule* (JF III) was at Huntley's Impoundment 8 and 13 May. *American Golden Plover* (JF III) was at North River Marsh and was seen again on 9 May. There are previous spring records for Upland Plovers, but these are first on a count day. The jaeger was seen by Will Hon from Bogue Bank, too far off shore for specific identification. *Traill's Flycatcher* (JF III), a first record for the county, was singing

fee-bee-o song near Walker Pond. *White-crowned Sparrow* (Charles Lincoln) showed up at a feeder on count day and remained until 13 May; it is first local spring record for species.--JOHN FUSSELL III, Box 520, Morehead City, N. C. 28557.

WILMINGTON, N. C. (center: Myrtle Grove Junction).
29 April. Two *Black Rails* were flushed in salt marsh across from Wrightsville Beach by Bobby Austin, Joyce Bennett, and compiler. *White-rumped Sandpiper* (Edmund LeGrand) was in rice field at Orton. Two *Black-necked Stilts* were seen by Edmund LeGrand and four were reported to Mrs. Appleberry by Lawrence Sprunt. The *Whip-poor-will* (Jay Carter and E. LeGrand) was calling. *Black-throated Blue Warbler* (Polly Mebane), *Black-throated Green Warbler* (Carter and E. LeGrand), and *Blackpoll Warbler* (Carter, E. LeGrand) were good finds. -- FRANCES NEEDHAM, P. O. Box 204, Wrightsville Beach, N. C. 28480.

CHARLESTON, S. C. (center: 14 miles NE of Mt. Pleasant and 0.5 mile E of Hwy 17).
23 April. *White Pelicans* (Perry Nugent, Nelson Taylor) were over marsh between Moore's Landing and Bull's Island; birds were seen in same vicinity by others during count period. *Gray Kingbird* (Dr. and Mrs. John K. Reed) was seen at close range at Stratton Place near Mt. Pleasant; previous spring records exist for area. Shortage of observers permitted coverage of only half of the areas in the total count circle. Data for each area are on file and available to anyone interested.--JULIAN R. HARRISON, Department of Biology, College of Charleston, Charleston, S. C. 29401.

COASTAL PLAIN

BEAUFORT COUNTY, N. C. (center: where Upper Goose Creek enters Pamlico River).
7 May. Weather caused several winter species to linger at feeders.--GERALDINE COX, Route Box 151 A, Merritt, N. C. 28556.

PAMILICO COUNTY, N. C. (center: in Florence at intersection of 1324 and 1329).
30 April. Painted Buntings seen in area, but not on county day.--MARVIN TURNAGE, Route 1, Box 25, Bayboro, N. C. 28515.

ROCKY MOUNT, N. C. (center: Battleboro, N. C.).
14 May. Rocky Mount has recently completed a 20,000-acre reservoir, and that is where the gulls and *Common Tern* were seen. The *Sanderlings* were not at the old sand pit where they have been found in the past but on some newly flooded land along NC 1717, the road to the new reservoir.--JOHN L. THOMPSON, 500 Evergreen Road, Rocky Mount, N. C. 27801.

SOUTHERN PINES, N. C. (center: Niagara, 3 miles NE of Southern Pines).
30 April. Long-billed Marsh Wren was present for third year in a row. *Lawrence's Warbler* (L. M. Goodwin Jr.) was seen briefly on the ground before it flew into trees and disappeared. Goodwin reported seeing a wide black line through the eye, black bib, yellow crown, and yellow breast clearly; but the wing was hidden by a twig. First record for area. [For another Moore County record of the Lawrence's Warbler in the spring of 1972, see Brief for the Files in this issue.--EFP] The *Le Conte's Sparrow* was found by Sandy Bishop, Jay Carter, James F. Parnell, and Dana Taylor, who flushed the bird at least 15 times at the extensive pasture and marsh complex known as Little River Farm. It showed a definite preference for wet sedges and was easily distinguished from Savannah Sparrows in flight because of its very pale back with definite streaking. Parnell and Carter plan to submit a note giving full details for publication in *Chat*. --J. H. CARTER III, Box 891, Southern Pines, N. C. 28387.

FAYETTEVILLE, N. C. (center: Methodist College).
5 May.--JOHN S. BUTLER JR., P. O. Box 3512, Fayetteville, N. C. 28305.

DILLON, S. C. (center: Dillon).

6 May. *Swainson's Warbler* was a good find, but not exactly unexpected in view of recent records from southeastern North Carolina (Southern Pines, Wilmington).--JOHN H. WILSON, Box 535, Dillon, S. C. 29536.

PIEDMONT

ROANOKE RAPIDS, N. C. (center: intersection of Seaboard Coastline tracks and Weldon city limits).

22 April. Both *Dunlin* (H. LeGrand) and *Short-billed Dowitcher* (E. LeGrand, Lynch) were rare spring transients at Occoneechee Neck. *Turkeys* (John Wright) were heard at Roanoke River. The 14 *Barred Owls* are not unusual for area but interesting in comparison with generally low numbers in other parts of state. Two *Swainson's Warblers* (Lynch, H. LeGrand, J. Wright) were heard distinctly singing in widely separated swampy canebrakes at Occoneechee Neck and were suspected of nesting. Lynch sighted one in May to confirm presence of species in area. Adult *Purple Gallinule* was at Occoneechee on 15 April and again on 13 May, but not on count day. Also during count period Lynch found three singing male *Cerulean Warblers* on 23 April in a mature flood-plain forest along the Roanoke River at Occoneechee Neck.--J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N. C. 27870.

HENDERSON, N. C. (center: Henderson).

29 April. *Cerulean Warbler* was found by the Carter-Hunter party. [This sighting is particularly interesting in view of the three singing males reported at nearby Occoneechee Neck six days earlier.--EFP]--NEITA ALLEN, 152 Lakes View Drive, Henderson, N. C. 27536.

RALEIGH, N. C. (center: Norfolk and Southern RR Crossing on Lake Wheeler Raod).

29 April. *Philadelphia Vireo* (Gail Whitehurst) was watched for some time at close range while perched in a small dogwood tree; all field marks indicated in Peterson were noted, including light yellow underparts.--R. J. Hader, 3313 Cheswick Drive, Raleigh, N. C. 27609.

CHAPEL HILL, N. C. (center: Franklin and Columbia Streets).

30 April. This spring has been characterized by consistently good conditions for migration, producing a steady flow of migrants but no spectacular waves. Our count reflects this, with good numbers of summer residents, a rather spotty list of transients, and small numbers of wintering species. The four *Pintails* (Forrest Calhoon) were locally unusual and our first for a spring count, as was the Snowy Egret seen during the count period by Pullman.--JAMES O. PULLMAN, Route 6, Box 149, Chapel Hill, N. C. 27514.

GREENSBORO, N. C. (center: WBIG transmitter).

29 April. [No details on Yellow-bellied Flycatcher.--EFP]--DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N. C. 27408.

WINSTON-SALEM, N. C. (center: intersection of I-40 and Silas Creek Pkwy).

29 April. *Philalelphia Vireo* (Hough party) was a singing bird watched closely. *Bachman's Sparrow* (Hough party) was compared with accompanying Field Sparrows; habitat, field marks checked. Janice Levitt saw the *Brewster's* hybrid warbler well enough to note all field marks.--C. ROYCE HOUGH, 713 Lankashire Road, Winston-Salem, N. C. 27106.

STATESVILLE, N. C. (center: Yadkin River 10 miles N of Statesville).

30 April. *Mourning Warbler* was seen by Jane Mullen. [No further details were given, but the record is not the first for that part of the state. Mark Simpson Jr. saw a Mourning Warbler in western Cabarrus County on 8 May 1967 (*Chat*, 31:77) along the

Rocky River, a tributary of the Yadkin-Pee Dee system.–EFP]–LOIS T. GOFORTH, Olin, N. C. 28660.

[In a letter dated 12 July 1972 Mrs. Mullen states that she saw the *Mourning Warbler* in an alder thicket along Rocky Creek at Sloan's Mill. Concealed by the thicket, she was able to see the grey hood and absence of eye ring and wing bars at close range. She also saw the *Tennessee Warblers* along the same stream.--EFP]

STANLY COUNTY, N. C. (center: about 2 miles NW of Badin).
29 April. Nina and Malcolm Chandler studied the *Dickcissels* carefully in their yard; one previous record for area. Bluebirds are increasing as more boxes are being placed. *Cliff and Barn Swallows* are plentiful under river bridges. *Bonaparte's Gulls* (Crook et al.) were on Badin Lake.–MRS. BARRETT CROOK, Route 2, Box 54, New London, N. C. 28127.

CHARLOTTE, N. C. (center: South Boulevard and Woodlawn Road).
6 May. *Canada Geese* (Flo Cobey) included two goslings. Yellowlegs was too far away for visual identification of species; call, if any, was indistinct. *Least Sandpiper* (Bill Cobey) was well seen at 20 feet.--JOE AND BECKY NORWOOD, 1329 Goodwin Avenue, Charlotte, N. C. 28205.

GREENVILLE, S. C. (center: Hwy 291 and 29).
6 May.--ROSA LEE HART HARDIN, Cleveland, S. C. 29635.

ELKIN-RONDA, N. C. (center: 3 miles N of Elkin on US 21).
6 May. *Tree Sparrow* was seen by Clara Henderson.--LIN HENDREN, Box 148, Elkin, N. C. 28621.

CALDWELL COUNTY, N. C. (center: Lenoir)
29 April. One Common Grackle had white in wing and tail feathers.–HELEN MYERS, 310 Beall Street, Lenoir, N. C. 28645.

MOUNTAIN

AVERY COUNTY, N. C. (center: Grandfather Golf and Country Club entrance, Linville, N. C.).
9 May. [No details given on Yellow-bellied Flycatcher.EFP]--MRS. RICHARD C. PROCTOR, 381 Westview Drive SW, Winston-Salem, N. C. 27104.

YANCEY-McDOWELL COUNTIES, N. C. (center: 2.3 miles S of Buck Creek Gap on NC 80).
22 April. *American Widgeon* (Halls) was on Lake Tahoma. *Red-breasted Merganser* (Halls) was a female at close range on small pond. The number of *Osprey* sightings was large for the area; locations were Catawba River near Greenlee, Morgan Lake, and Lake Tahoma. Two adult male *Prothonotary Warblers* were seen in good light singing at Lake Tahoma (Halls). *Rusty Blackbird* (Halls) was associating with Red-winged Blackbirds in marsh at northern end of Lake Tahoma; sighting confirmed by call. *Brewer's Blackbird* (Halls) was on a power line by NC 80.–ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N. C. 28778.

BUNCOMBE COUNTY, N. C. (center: intersection of US 70 and SR 2740 in Swannanoa).
29 April. Count center moved 1.1 mile SW to take in more accessible territory. Elevations range from 2,018 feet at the intersection of US 74 and NC 81 to 6,085 feet at Craggy Dome on the Blue Ridge Parkway north of Asheville.

Common Loon (Margaret Finch, Robert Ruiz) was on north end of North Fork Lake. One *Ruby-throated Hummingbird* (Gorden Mahy, et al.) was at Craggy Gardens (elevation 5,000 feet). *Common Raven* (Holt party) was at low elevation in Montreat. *Brown-headed Nuthatch* has been at Mrs. Stanley Masters' feeder since middle of April; continued presence of two birds on 10 May suggests possibility of nesting nearby, which would be very unusual for this area. *Swainson's* and *Nashville Warblers* were found by Hall family in Fairview area. Three *Tree Sparrows* (Linda and Wendell Cisco) were at Oteen, and fourth was in Mary F. Sawyer's yard. *White-crowned Sparrows* were seen by Mrs. S. M. Rauchwerger in her yard at Chunn's Cove.–ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N. C. 28778.

OBSERVERS

BODIE-PEA ISLAND, N. C.: Edmund LeGrand, Harry LeGrand.

MOREHEAD CITY, N. C.: John Fussell II, John Fussell III, Will Hon, Charles Lincoln, Don McCrimmon, C. J. Spears, Dick Williams, Doris Williams.

WILMINGTON, N. C.: Chris and Bill Alexander, Mrs. S. L. Alexander, Edna Appleberry, Bobby Austin, Joyce Bennett, J. H. Carter III, Betty and Lloyd Davis, Dot Earle, Janet and Haskell Hart, Frank Kosh, Kitty Kosh, Harry Latimer III, Edmund LeGrand, Harry LeGrand, Billie McEachern, Polly Mebane, Frances Needham, Ann T. Nicholson, James F. Parnell, Mary Urich, John Waggett, Mrs. J. M. Waggett.

CHARLESTON, S. C.: William D. Anderson Jr., David M. Cline, Margaret N. Harrison, Julian R. Harrison, Kenneth E. Hough, Anne-Marie C. Noe, Perry Nugent, Jeanette Oldland, Dr. and Mrs. John K. Reed, Bruce Stender, Nelson W. Taylor (Members and Guests, Charleston Natural History Society).

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New and Timely. A beautiful book, SWAMPS, RIVER BOTTOMS, AND CANEBRAKES, by Brooke Meanley, has just been issued by Barre Press, Barre, Massachusetts. The excellent text is complimented by many photographs by Brooke and other naturalists, and it describes swamps and river bottoms from Dismal Swamp to the Everglades. Of special interest to Carolinians are the chapters on I'On Swamp, Big Swamp on the Edisto, and the Pinetown Pocasin. Birders will enjoy the accounts of the Bachman's Warbler, the Swainson's Warbler, and the Ivory-billed Woodpecker of the Tensa Bottoms. Anyone who enjoys the watery wilderness areas of the south will want this book.

General Field Notes

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Barnacle Goose in Currituck County, N. C.

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3 May 1972

While driving through Currituck County, N. C., on 12 February 1972, my wife, Sandy, and I stopped to count a large flock of Snow Geese *(Chen hyperborea)* in a field about 1 mile N of Coinjock. We were rather surprised to find an adult Barnacle Goose *(Branta leucopsis)* feeding with 1,500 Snow Geese and 2 adult Blue Geese *(Chen caerulescens)*. At first glance it looked like a small race of the Canada Goose *(Branta canadensis)* or an American Brant *(Branta bernicla)*, but closer study with a 30X scope and 7 x 35 binoculars disclosed the white forehead and cheeks, black neck and upper breast, blue-gray back, and small size which identified it as a Barnacle Goose. The feet, legs, and bill were black and the narrow black line from the bill to the eye was visible. We studied the bird at leisure for 20 to 30 minutes as it fed among the larger Snow and Blue Geese. Mitchell Byrd (pers. com.) and Robert L. Ake (pers. com.), independent of each other, each found the Barnacle Goose in the same area on 20 February 1972 and agreed with our identification. The bird was also found earlier, on 10 January 1972, at Coinjock by Floy C. Burford (pers. com.).

These sightings are particularly interesting, considering there was a Barnacle Goose seen in North Carolina the previous winter (6 and 13 November 1970) at Pea Island National Wildlife Refuge (Burford, *Chat,* 35:52, 1971), which is only about 50 air miles SE of the Coinjock location.

Snow Geese Seen in Wake County, N. C.

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22 March 1972

On 1 December 1971 I saw 10 Snow Geese *(Chen hyperborea)* on a 16-acre farm pond near NC 39 and US 264 in eastern Wake County, N. C. The birds were discovered about 8:00 AM as they sat on the water. James R. Creech Jr. and I watched them with binoculars, and we noted the white body with black wing tips. The geese left the pond before noon and were not seen again.

[DEPT. ED. -- While Snow Geese are regular visitors to the North Carolina coast, inland records are very few. Hader (*Chat,* 33:53-71) did not list this species as having been recorded in Wake County.]

First Record of Curlew Sandpiper for North Carolina

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PETER GRAHAM
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22 February 1972

While conducting a shorebird census at Bird Shoal, just south of Beaufort, N. C., on 29 June 1971, Peter Graham and John Fussell discovered a Curlew Sandpiper *(Erolia ferruginea)*. It was seen at 12:30 PM, feeding with Short-billed Dowitchers *(Limnodromus griseus)*. The sandpiper was molting, but it had some rufous color on the breast. It was this rufous color that made the bird very conspicuous, as all dowitchers present at this time were in non-breeding plumage. The Curlew Sandpiper was also obviously smaller than the dowitchers. Although it probed deeply, both observers had brief glimpses of its decurved bill. After several minutes, the observers flushed the bird and saw the white rump. The sandpiper then flew about 50 yards, landed, and began feeding again–this time with dowitchers and Semipalmated Sandpipers *(Ereunetes pusillus)*. It soon became aggressive toward a Semipalmated Sandpiper, which flew away with the Curlew Sandpiper in pursuit. Both birds were quickly lost from view.

The next day, 30 June, Fussell and Graham returned and found the Curlew Sandpiper on the Beaufort Inlet side of Bird Shoal resting with Semipalmated Sandpipers and Semipalmated Plovers *(Charadrius semipalmatus)*. Later in the afternoon, Fussell returned to Bird Shoal with Eugene Pond of Beaufort. Pond collected the bird which has been placed in the scientific collection of study skins at the North Carolina State Museum of Natural History in Raleigh (NCSM No. 4100). Examination of the specimen by Micou Browne revealed it to be an adult female with an ovary 5.5 mm by 2.5 mm. The bird was moderately fat.

In the specific area where the Curlew Sandpiper was found, a shorebird census was conducted weekly from 18 May to 14 June, almost daily from 14 June to 30 June, and approximately three times a week from 30 June to late August. In addition to these censuses, some part of the general area surrounding Bird Shoal (lower Newport River-lower North River-Beaufort Inlet area) was being studied almost daily from late May until early August, and notes were made on the occurrence of shorebirds. From these censuses and other observations, it was apparent that the Curlew Sandpiper was found during the first wave of the "fall" migration. During the last week in June, certain species were returning to the Beaufort area after a brief absence in early and/or mid-June. It is interesting that John Bull lists 27 June as the fall arrival date for the Curlew Sandpiper in the New York City region (*Birds of the New York City Area*, p. 207).

This is the first record of the Curlew Sandpiper for the Carolinas. A survey of *Audubon Field Notes*, volumes 14-25 (1960-1971), revealed one record for Georgia and one for Florida. However, during this same period 40 sightings of one or two individuals were reported from New Jersey, Delaware, New York, Virginia, and Connecticut–27 from New Jersey alone; so the Curlew Sandpiper can be considered regular, if infrequent, in the Middle Atlantic States. Most of these published records are for May and July, with a few scattered from August until November, by which time the birds are in winter plumage. Although no experienced birder would overlook a Curlew Sandpiper in breeding plumage, Carolina birders might do well to look carefully for "suspicious-looking" Dunlins in fall.

The research on which this paper is based was conducted on a National Science Foundation Award (GY-8505) for a "Summer Research Participation for College Teachers Program" to the School of Agriculture and Life Sciences, N. C. State University, H. B. Craig, Director. T. L. Quay, Department of Zoology, was our research director.

[DEPT. ED. -- With the placement of this specimen in the collection of the North Carolina State Museum of Natural History the Curlew Sandpiper can be added to the official North Carolina bird list.]

Spring Record of Saw-whet Owl From North Carolina Piedmont

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The Saw-whet Owl *(Aegolius acadicus)* is a fairly common summer resident of the Canadian zone forests of the southern Appalachians were Simpson (*Chat,* 36:39-47) has found the species calling from 11 April through 13 June. On 7 April 1972 at 7:50 PM I heard a Saw-whet calling for several minutes from a mixed (mainly pine) woods 2 miles NE of Raleigh, Wake County, N. C. The wind was calm, and the air temperature was 74 F; but a cold front was approaching, and rain was imminent. Rain showers began shortly after 8:00 PM and continued until well after the frontal passage at about 10:00 PM. The low temperature on 8 April was 32 F and the high only 43 F. The next night the temperature dropped to 23 F. Subsequent attempts to locate the owl were unsuccessful. While there are several fall and winter sightings of the Saw-whet Owl in Wake County, I am not aware of any previous spring records for the Raleigh area or of any other call-record for the eastern part of the state.

Winter Records of the Brown-headed Nuthatch In the Southern Appalachian Mountains

MARCUS B. SIMPSON JR.
P. O. Box 167, Statesville, N. C.

20 December 1971

According to Pearson, Brimley, and Brimley (1942) the Brown-headed Nuthatch *(Sitta pusilla)* is limited in its distribution to the region "east of the mountains" in North Carolina, with no records west of Burke County. In a previous paper, however, I have noted (Simpson, 1969) that John S. Cairns observed and collected specimens of this species near Weaverville, Buncombe County, N. C., in the late autumn and winter of 1893-1894 and obtained a nest with eggs during the summer of 1894. Following these observations, there have been no subsequent records of the species from the Appalachian Mountain region, in spite of extensive field work in the area by amateur and professional ornithologists. Thomas D. Burleigh, for example, conducted full-time field work throughout Buncombe County from 1930 to 1934; and he informs me (pers. com.) that he never observed the species during that period.

Within the past two years, however, the bird has been noted in Buncombe County, N. C., on a number of occasions during the winter season. The first observation came on 13 February 1970, when I found two Brown-headed Nuthatches in company with a flock of Carolina Chickadees *(Parus carolinensis)* and Tufted Titmice *(Parus bicolor)* in a mixed pine-hardwood forest bordering the French Broad River near the Bent Creek Experiment Station (elevation 2,100 feet) on NC 191 south of Asheville. Subsequently, Donald H. Defoe (pers. com.) observed a single Brown-headed Nuthatch at a suet feeder at Candler, N. C. (elevation 2,100 feet) on 7 and 8 March 1970. More recently, Roland L. Sargent (pers. com.) reported an influx of the birds into the pine woods bordering Lake Julian (elevation 2,200 feet) south of Asheville, with four birds seen on 5 November, three on 11 November, five on 21 November, and five on 29 December, all during 1971.

All of these records have been confined to the lower elevations of Buncombe County along the extensive, broad flood plain and valley of the French Broad River and its tributaries; and there is no evidence to suggest its occurrence in the high mountain ranges surrounding the interior valleys.

The Brown-headed Nuthatch is a fairly common permanent resident in the piedmont of North and South Carolina and Georgia at elevations up to approximately 1,000 feet; but the Blue Ridge Mountains apparently serve as a very efficient barrier to the westward or northward extention of the species into the interior river basins of the southern

Appalachian Mountains. Apparently, however, individuals of the species do on occasions cross the Blue Ridge, presumably from the piedmont population immediately to the east and south. The present records and those by Cairns in 1893-1894 indicate that these invasions occur during the winter months, possibly in response to population pressures and inadequate food supply in the piedmont. Interestingly, the first record of the species for the state of Tennessee came at Collegedale, where Basham (1969) noted the birds present from 14 December 1969 to 4 May 1970; and it was during this same winter season that my observation of the bird at Bent Creek marked the first record of the species from the southern Appalachians since 1894. This coincidence of dates suggests that sporadic winter movements of the species to the north and west may be responsible for the occurrence of the bird in the interior river valleys of the Appalachian Mountains. Furthermore, John Cairns' observations in the 1890s indicated that these invading birds lingered in the area and nested during the following breeding season. Unfortunately, Cairns' death in 1895 precluded any further notes on the fate of this population; but their subsequent absence from the region suggests that ecological conditions were not favorable to their perpetuation in the interior basins, which are over 1,000 feet higher than the piedmont plateau to the east of the Blue Ridge escarpment. Nevertheless, the recent winter records of the species in Buncombe County should alert local observers to the possibility of additional sightings and subsequent nesting in the extensive pine forests of the French Broad River valley and its tributaries.

ACKNOWLEDGMENTS

I am indebted to Donald H. DeFoe and Roland L. Sargent for permission to publish their records.

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Painted Bunting at Clinton, S. C.

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25 May 1972

During a 3-week period in the spring of 1972 a male Painted Bunting *(Passerina ciris)* visited a feeding station in Clinton, S. C., on at least four occasions. The observation distance, 4 feet, allowed positive identification on all sightings, which were on 16, 25, and 26 April and 8 May. On 26 April Jane P. Holt, Biology Department, Presbyterian College, and Mrs. Ira D. Holt of Clinton verified our identification.

The presence of a Painted Bunting in piedmont South Carolina, approximately 65 miles NW of Columbia, is unusual. Sprunt and Chamberlain (*South Carolina Bird Life,* 1970) note that the species rarely penetrates beyond the fall line. The lack of nesting activities and the absence of a female suggest that the sightings were of a transient individual.

[The spring bird count for Stanly County, N. C., (*Chat,* 35:82) records the presence of a pair of Painted Buntings in piedmont North Carolina on 24 April 1971.--JRH]

Status of the Golden-crowned Kinglet on the Highlands Plateau

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23 April 1971

The American Ornithologists' Union (1957) lists the Golden-crowned Kinglet *(Regulus satrapa)* as breeding "southward in the mountains to eastern Tennessee and western North Carolina," but no specific locale is given as the most southern point of nesting in the eastern United States. Sprunt and Chamberlain (1948) regard the bird as only a winter resident in South Carolina, while Burleigh (1958) lists no summer records from Georgia. Although Pearson, Brimley, and Brimley (1959) make no mention of the bird from the Highlands area, a growing body of evidence suggests that this high plateau region in southeastern Macon County, N.C., is the most southern breeding site for this species in the eastern United States.

Curiously, the Golden-crowned Kinglet was not found at Highlands by Brewster (1886) during his visit in May 1885, nor were any individuals noted by Torrey (1898) although he thoroughly explored the area from 6 to 27 May 1896. Apparently the first records of the bird during the breeding season came when A.H. Howell reported individuals on 23 June 1930 in the great virgin tract of eastern hemlock *(Tsuga canadensis)* known as the Primeval Forest. Subsequently, Henry Stevenson noted the species in the Primeval Forest on 9 August 1937; but the species was largely extirpated from this vast tract by the heavy cutting of timber during World War II. Individuals have been noted in Highlands on 8 June 1944 by Lydia Sargent; on 26 March 1950 and 1953 and throughout June 1956 by Toliver Crunkleton; from 22 through 29 June 1965 by D.T. Rogers Jr.; and on 27 August 1965 by D.W. Johnston (unpublished records from the Highlands Biological Laboratory). I noted singing males on 15 July 1968, two pairs on every day from 3 through 25 June 1969, and a singing male on 16 June 1970, all records coming from the mature stands of white pine *(Pinus strobus)* adjacent to the Highlands Biological Station buildings.

In spite of the frequent summer observations, there appears to be only one verified nesting record from the region. On 11 June 1951 a Golden-crowned Kinglet nest was discovered 15 feet up in a Norway spruce *(Picea abies)* on the Rebecca Harris property next to the Highlands Biological Station (elevation 3,800 feet). Identification of the nesting pair was confirmed by Mrs. Allan Brown, J. M. Valentine, and Toliver Crunkleton; and Brown reported that three young birds were successfully fledge (pers. com.).

Although this species is commonly thought of as confined to the Canadian zone forests of Fraser fir *(Abies fraseri)* and red spruce *(Picea rubens)*, in the Highlands region the bird is associated with mature stands of eastern hemlock and white pine. Johnston (1964) suggested that the destruction of the Primeval Forest in the 1940s probably had an adverse impact on the Golden-crowned Kinglet population of the Highlands Plateau; but the species has apparently remained established as a summer resident in the region, although its numbers may have been significantly reduced. Observers in the Highlands region should remain alert to document additional breeding records of this locally common summer resident for which Macon County, N.C., appears be the most southern breeding site in eastern North America.

ACKNOWLEDGEMENTS

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BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N. C. 27514

(All dates 1972)

COMMON LOON: Three inland migrants were noted as early as 23 March at North Wilkesboro, N. C., by Wendell Smith. Good inland counts of 24 were recorded elsewhere at Roanoke Rapids, N. C., on 8 April by Merrill Lynch and 7 at Raleigh, N. C., on 22 April by Robert Hader. Three late transients were also seen at Roanoke Rapids on 31 May, Merrill Lynch.

RED-NECKED GREBE: Two unexpected occurrences were recorded at Roanoke Rapids, N. C., where an individual in breeding plumage was seen on 1 April and another in winter plumage on 11 April by Merrill Lynch.

HORNED GREBE: At Raleigh, N. C., a late transient appeared on 16 May, Robert Hader.

SOOTY SHEARWATER: Migrants were observed just off shore at Bodie Island, N. C., on 27 May moving northward in a steady stream throughout the day at a rate of 5 to 18 per minute past Coquina Beach, yielding an impressive count of some 8,000 birds, Robert Ake and W. W. Fogelman. Elsewhere along the coast, between the dates of 13 May and 4 June, Sooties were seen singly or in small numbers by other observers off Cape Hatteras, Cape Lookout, Atlantic Beach, Carolina Beach, and Charleston.

WILSON'S PETREL: Three were seen off Cape Lookout, N. C., on 13 May by Henry Haberyan; and 6 to 10 were seen at Carolina Beach, N. C., on 31 May by Jay Carter and James Parnell.

GANNET: Lingerers were still present in late May along the North Carolina coast where four were seen off the Bodie-Pea Island beaches on 27 May by Robert Ake and W. W. Fogelman, two on the same date off Atlantic Beach by Robert and Elizabeth Teulings, and one off Carolina Beach on 31 May by James Parnell and Jay Carter.

COMMON EGRET: At Raleigh, N. C., two individuals were uncommon spring visitors on 22 April and 27 May, Robert Hader.

SNOWY EGRET: Several spring visitors were recorded inland, with single birds noted at Roanoke Rapids, N. C., on 16 April by Merrill Lynch; at Raleigh, N. C., on 22 and 23 April by Harry LeGrand, Edmund LeGrand, and Robert Hader; and at Chapel Hill, N. C., on 13 May by James Pullman.

AMERICAN BITTERN: Six were found by Merrill Lynch at Occoneechee Neck in Northampton County, N. C., on 15 April.

BLACK-CROWNED NIGHT HERON: Locally unusual inland occurrences were recorded at Westerly Lake on the Biltmore Estate, Asheville, N. C., on 10 May by the John Hall family and at Raleigh, N. C., on 15 May by Harry and Edmund LeGrand.

YELLOW-CROWNED NIGHT HERON: An uncommon spring visitor was seen at Lake Hartwell near Clemson, S. C., on 4 April by Sidney Gauthreaux, and another was found near Chapel Hill, N. C., on 7 May by James Pullman.

BRANT: A good count of 150 was tallied on the North Carolina coast at Oregon Inlet on 15 April by Plumer Wiseman and Fenton Day.

BLUE GOOSE: Nine winter lingerers were found at Pea Island Refuge, N. C., on 22 April by Plumer Wiseman and Fenton Day.

BLACK DUCK: An individual was noted at Huntington Beach State Park, S. C., on 3 June by Frederick Probst.

AMERICAN WIDGEON: A male was a late straggler at Huntington Beach State Park on 27 May, Frederick Probst.

LESSER SCAUP: Six were still present on 28 May at West Onslow Beach, N. C., as observed by Gilbert Grant and Edward Hudson; and two late individuals were seen at Carolina Beach, N. C., on 31 May by Jay Carter and James Parnell. Elsewhere, another late bird was found at the National Fish Hatchery near Orangeburg, S. C., on 2 June by Lawrence Robinson.

COMMON GOLDENEYE: One was an uncommon visitor at North Wilkesboro, N. C., on 13 April, Wendell Smith.

OLDSQUAW: A mixed flock of nine was seen at Roanoke Rapids Lake near Roanoke Rapids, N. C., on 8 April and a single female was seen there the next day, Merrill Lynch. A coastal sighting was recorded at Hilton Head Island, S. C., on 5 May where a male was studied at close range by Alice Chapman and Caroline Newhall.

COMMON SCOTER: Several late lingerers were seen off Bogue Bank, N. C., on 28 and 29 May by John Fussell; two were seen off Huntington Beach, S. C., on 5 June by Frederick Probst.

RUDDY DUCK: One was late at Raleigh, N. C., on 24 May, Harry and Edmund LeGrand.

HOODED MERGANSER: Late sightings were recorded at Chapel Hill, N. C., on 20 May by James Pullman; at North Wilkesboro, N. C., on 25 May by Wendell Smith; and at Roanoke Rapids, N. C., on 26 May by Merrill Lynch.

RED-BREASTED MERGANSER: A careful tally of 364 birds was recorded by Merrill Lynch at Roanoke Rapids Lake, N. C., on 1 April, an exceptionally large inland count. Elsewhere, one was an unusual visitor at Lake Julian near Skyland, N. C., on 4 April, Robert Ruiz.

MISSISSIPPI KITE: Six were seen 30 miles W of Charleston, S. C., on the very early date of 3 March by Mike Browne.

SWALLOW-TAILED KITE: On 15 April one was unexpectedly observed soaring over Nags Head on the North Carolina coast, well north of its usual range, Plumer Wiseman and Fenton Day.

SHARP-SHINNED HAWK: One was seen at North River Marsh, Carteret County, N. C., on 27 May by John Fussell.

BALD EAGLE: An adult was seen at Sumter, S. C., on 13 May by Dick Lee; and another was sighted at Roanoke Rapids, N. C., on 21 May by Merrill Lynch.

OSPREY: An unusually high local count of seven was recorded at Lake Wheeler near Raleigh, N. C., on 15 April by Harry and Edmund LeGrand.

PEREGRINE FALCON: One was observed feeding on a freshly killed Cattle Egret at McClellanville, S. C., on 9 April by Stan Langston.

PIGEON HAWK: An uncommon spring occurrence was recorded at North Wilkesboro, N. C., where an individual was seen on 24 April by Wendell Smith.

PURPLE GALLINULE: Individuals were noted at Huntley's Impoundment near Morehead City, N. C., on 8 and 13 May by John Fussell and at Occoneechee Neck in Northampton County, N. C., on 15 April and 13 May by Merrill Lynch.

COMMON GALLINULE: An uncommon local sighting was recorded near Roanoke Rapids, N. C., on 16 April by Merrill Lynch.

AMERICAN COOT: At Raleigh, N. C., three late stragglers were seen on Lake Benson on 27 May and one on Lake Raleigh on 3 June, Robert Hader.

SEMIPALMATED PLOVER: James Pullman observed a lone transient inland at Chapel Hill on 14 May, and Merrill Lynch found six at Occoneechee Neck, N. C., on 13 May.

AMERICAN GOLDEN PLOVER: An individual in winter plumage was seen at North River Marsh near Morehead City, N. C., as late as 9 May, John Fussell.

BLACK-BELLIED PLOVER: One seen at Greenview Farm near Raleigh, N. C., on 6 May by Robert Hader was the first spring record for Wake County. Elsewhere, another inland sighting was recorded by Sidney Gauthreaux at Lake Hartwell near Clemson, S. C., on 14 May.

UPLAND PLOVER: An unusually late spring transient was seen near North Wilkesboro, N. C., on 21 May by Wendell Smith.

GREATER AND LESSER YELLOWLEGS: Both species were seen regularly at Occoneechee Neck, N. C., during the spring, with peak counts of 14 Greaters and 23 Lessers recorded there on 9 April, Merrill Lynch.

KNOT: One was carefully studied at Occoneechee Neck, Northampton County, N. C., on 3 April by Bill Collier and Merrill Lynch, a rare inland sighting.

WHITE-RUMPED SANDPIPER: At Raleigh one was seen on 7 May by Ross Silcock and up to four were noted in that locality in late May and early June by Chris Marsh and Robert Hader.

LEAST SANDPIPER: A very early visitor was recorded at Raleigh on 18 March by Edmund and Harry LeGrand. Later occurrences were reported by observers at several other North Carolina interior locations during the period 30 April through 27 May, including an unusually high inland count of 56 at Occoneechee Neck, N. C., on 13 May by Merrill Lynch.

DUNLIN: A rare inland spring occurrence was noted at Occoneechee Neck, N. C., where a single bird, acquiring its breeding plumage, was seen on 22 April by Edmund LeGrand, Harry LeGrand and Merrill Lynch.

SHORT-BILLED DOWITCHER: One was seen and identified by call at Occoneechee Neck, N. C., on 22 April by Edmund LeGrand and Merrill Lynch, a first local record.

SEMIPALMATED SANDPIPER: An individual was noted at North Wilkesboro, N. C., on 4 May by Wendell Smith. Five were tallied on 13 May by Merrill Lynch at Occoneechee Neck, and three were seen at Chapel Hill, the next day by James Pullman. Several were also seen by observers in the Raleigh area between 29 April and 28 May.

WESTERN SANDPIPER: A single visitor was seen at Raleigh, N. C., on 17 April by Chris Marsh and Harry LeGrand.

RED PHALAROPE: Dennis Forsythe sighted two birds offshore about 35 miles ESE of Charleston, S. C., on 30 May.

NORTHERN PHALAROPE: Thirty were found at Pea Island, N. C., on 27 May by Robert Ake and W. W. Fogelman; and another individual was sighted farther south at Huntington Beach, S. C., on the same date by Frederick and Renee Probst as storm winds buffeted the coast.

RING-BILLED GULL: Good numbers were present at Roanoke Rapids, N. C., through the spring period with a peak count of at least 1,300 recorded there on 1 April by Merrill Lynch.

HERRING GULL: Six were seen inland at Lake Wheeler near Raleigh, N. C., on 22 April by Robert Hader.

LAUGHING GULL: An individual on 16 May and three on 31 May were unusual local visitors at Roanoke Rapids, N. C., Merrill Lynch.

BONAPARTE'S GULL: Spring occurrences of this species were common at Roanoke Rapids, N. C., where a peak count of 115 was recorded by Merrill Lynch on 16 April. Up to seven were seen on 3 and 4 April at Raleigh by Robert Hader, and an individual in full breeding plumage was present there on 28 and 29 April as reported by John Fussell, Harry LeGrand, and Edmund LeGrand.

FORSTER'S TERN: A sighting of four on 3 April at Lake Wheeler near Raleigh, N. C., was a rare local record, Robert Hader.

COMMON TERN: Inland occurrences were reported with unusual frequency during the spring period. A single bird was observed closely for an hour over Lake Julian at Skyland, N. C., on 10 May by Robert Ruiz. At least 10 were seen over Lake Hartwell near Clemson, S. C., on 14 May by Sidney Gauthreaux. Fifteen were sighted at Par Pond on the grounds of the AEC Savannah River Plant, Barnwell County, S. C., on 17 May by

Lehr Brisbin. Elsewhere, at Roanoke Rapids, N. C., Merrill Lynch observed 8 migrants on 9 May, 16 on 10 May, and 1 on 31 May.

CASPIAN TERN: Two were noted at Lake Hartwell near Clemson, S. C., on 12 April by Sidney Gauthreaux; two at Lake Benson near Raleigh, N. C., on 29 April by Robert Hader; and two at Roanoke Rapids, N. C., on 21 May by Harry LeGrand *et al.*

BLACK TERN: Three were observed at Lake Hartwell near Clemson, S. C., on 14 May by Sidney Gauthreaux.

BLACK-BILLED CUCKOO: Wendell Smith noted a transient at North Wilkesboro, N. C., on 28 April.

GREAT CRESTED FLYCATCHER: One was noted on the early date of 19 March in the Santee Swamp, Sumter County, S. C., by Evelyn Dabbs, Elizabeth Teulings, and Robert Teulings.

TRAIL'S FLYCATCHER: Several were heard singing near Raleigh, N. C., in late May by Edmund and Harry LeGrand at the site where others were found during last year's nesting season (*Chat,* 35:113). Events there will be watched closely to see whether the species is successful in establishing a breeding population in the eastern piedmont.

YELLOW-BELLIED FLYCATCHER: One was seen and heard near Seaboard, N. C., on 21 May by Merrill Lynch.

OLIVE-SIDED FLYCATCHER: Individuals were noted at Umstead State Park near Raleigh, N. C., on 17 May by Edmund and Harry LeGrand and at North Wilkesboro, N. C., on the late date of 3 June by Wendell Smith.

TREE SWALLOW: An incident was observed 25 April near Roanoke Rapids, N. C., by Merrill Lynch of a large flock flying SSE in advance of a cold front, an apparent example of "reverse" migration.

BANK SWALLOW: About 50 were seen at Roanoke Rapids, N. C., on 25 April by Merrill Lynch. Migrants were also conspicuous in the Raleigh area on 26 and 27 May where several hundred were recorded by Rober Hader and other observers.

ROUGH-WINGED SWALLOW: One was found rather early at Roanoke Rapids, N. C., on 14 March, Merrill Lynch.

CLIFF SWALLOW: An uncommon transient was recorded at Raleigh, N. C., on 8 April by Harry and Edmund LeGrand. Another was seen at Clemson, S. C., on 9 April by Sidney Gauthreaux; and two were also noted at North Wilkesboro, N. C., on 26 April by Wendell Smith.

RED-BREASTED NUTHATCH: A winter visitor remained at Chapel Hill, N. C., as late as 12 May, Elizabeth Teulings.

VEERY: One was early at North Wilkesboro, N. C., on 17 April, Wendell Smith.

BLUE-GRAY GNATCATCHER: Early sightings were recorded at Scotland Neck, N. C., on 15 March by Robert Teulings and at Goldsboro, N. C., on 19 March by Jay Carter.

CEDAR WAXWING: A late-lingering flock on 30 was seen at Cary, N. C., on 16 May by Robert Teulings.

SOLITARY VIREO: An early transient was noted near Durham, N. C., on 3 April by Mrs. Paul S. Payne.

PHILADEPHIA VIREO: A spring transient was seen at North Wilkesboro, N. C., on 3 May by Wendell Smith.

PROTHONOTARY WARBLER: One was recorded unusually early in the Raleigh area on 2 April by Harry LeGrand.

SWAINSON'S WARBLER: Charles Blake banded a transient at Hillsborough, N. C., on 29 April.

LAWRENCE'S WARBLER: A male was carefully identified at Eagle Springs, N. C., on 12 May by Dot Griffin and party.

NASHVILLE WARBLER: One was a scarce spring transient at North Wilkesboro, N. C. on 24 April, Wendell Smith. Another was banded at Sumter, S. C., on 12 May by Evelyn Dabbs.

BLACK-THROATED BLUE WARBLER: A late transient was heard singing along the Eno River, Orange County, N. C., on 31 May by Robert Teulings.

CERULEAN WARBLER: Two males were seen in Richland County, S. C., near Columbia on 16 April by Bruce Mack.

BLACKPOLL WARBLER: At least 10 individuals were seen during the period 10 to 16 May on Bogue Banks, N. C., by John Fussell, and 15 to 20 were seen in the vicinity of Kitty Hawk, N. C., on 11 May by Harry LeGrand and party, indicating a noticeable northward movement along the coast.

OVENBIRD: One was an unexpected find on Bogue Banks, N. C., on 11 May by John Fussell.

NORTHERN WATERTHRUSH: A migrant seen on Bogue Banks, N. C., on 12 May by John Fussell was locally unusual. The sighting is believed to be only the second record for coastal Carteret County.

WILSON'S WARBLER: Occurrences at several locations gave evidence of a significant migration through North Carolina during the last half of May. Single birds were banded at Hillsborough on 17 and 23 May by Charles Blake. Wendell Smith recorded a transient at North Wilkesboro on 17 May, and one was also seen the following day at Durham by Oliver Ferguson. At Raleigh three individuals were recorded by Edmund LeGrand during the period 15 to 24 May, and three birds were seen on 27 May at Roanoke Rapids by Merrill Lynch.

BALTIMORE ORIOLE: At least six were seen in the Bodie Island area from Oregon Inlet northward to Duck from 9 to 11 May by Edmund and Harry LeGrand.

ROSE-BREASTED GROSBEAK: Sightings of several individuals on Bogue Banks from late April through mid-May (John Fussell) and additional observations of six or more transients in the Bodie Island area 9 to 11 May (Edmund and Harry LeGrand) point to a definite spring movement of this species along the North Carolina coast.

PAINTED BUNTING: One was noted as early as 12 March at Hilton Head Island, S. C., by Caroline Newhall. Another was seen as far westward as Clinton in Laurens County, S. C., on 25 April by Lillian Brown.

EVENING GROSBEAK: Winter stragglers lingered in South Carolina as late as 11 May at Sumter (Evelyn Dabbs) and 13 May at Clemson (Sidney Gauthreaux); and one was present until 24 May at Southern Pines, N. C. (Jay Carter).

PINE SISKIN: A few lingerers were still present at the end of May at Winston Salem, N. C., as reported by Ramona Snavely.

LARK BUNTING: A male was a visitor at Charles McRae's feeder in Marion, S. C., from 22 April through 2 May. This record, documented with photographs by Dr. McRae, represents the first reported spring occurrence for the state.

WHITE-THROATED SPARROW: One was very late at Durham, 5 June, Oliver Ferguson.

WHITE-CROWNED SPARROW: There was a spring report of two seen at Occoneechee Neck in Northampton County, N.C., on 23 April by Merrill Lynch. On the coast one was present at a feeder in Morehead City, N. C., 23 April to 13 May, Charles Lincoln and John Fussell.

LINCOLN'S SPARROW: One was banded at Clemson, S. C., on 10 April by Sidney Gauthreaux.

SWAMP SPARROW: A migrant was noted at Chapel Hill, N.C., on the late date of 20 May by James Pullman, and another at Seaboard, N. C., on 21 May by Merrill Lynch.

******

Good News! 1,800 acres in Four Holes Swamp in South Carolina have been purchased jointly by Nature Conservancy and the National Audubon Society. This swamp contains what is believed to be the last large stand of virgin river bottom cypress trees on the continent, with trees so ancient they predate the founding of America. This is part of a 3,500-acre tract, and the remaining portion will serve as a buffer zone to the sanctuary. The swamp is exceedingly rich in plant and animal life.

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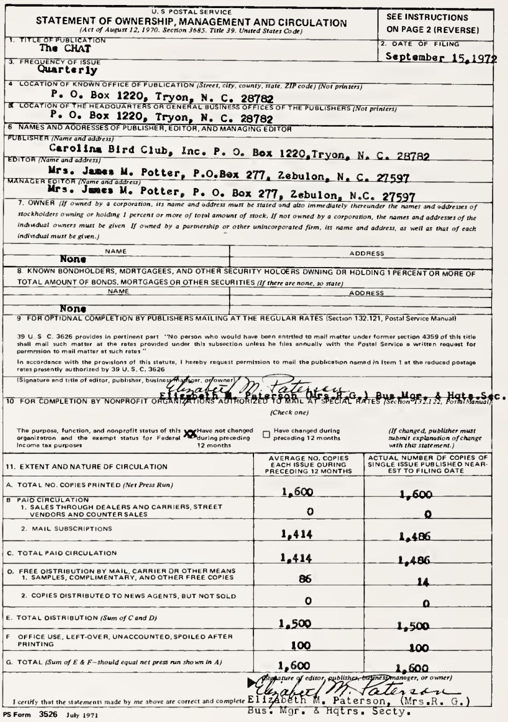

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NOTES ON THE SUMMER BIRDS OF THE SOUTH MOUNTAINS

MARCUS B. SIMPSON JR.

Rising abruptly from North Carolina's rolling western piedmont are two regions of mountainous terrain, known collectively as the Outer Blue Ridge. These two ranges, the South Mountains below Morganton and the Brushy Mountains north of Statesville, lie some 15 to 30 miles SE of the Blue Ridge Escarpment and are separated from this major range by a rolling hill country whose elevation averages slightly above 1,000 feet. With numerous peaks rising above 2,500 feet, these ranges reveal a mixture of typical piedmont and mountain avifauna; and for this reason they serve as valuable areas for the study of altitudinal limitations for the breeding of a number of species.

STUDY AREA

The South Mountains begin as a series of low ridges between Hickory and Morganton, with the bulk of the higher terrain extending in a southwesterly direction for some 25 miles through portions of Burke, Rutherford, McDowell, and Cleveland Counties. The range generally tends to be higher in elevation than the Brushy Mountains, with at least 11 peaks in excess of 2,800 feet and the maximum elevation at 2,905 feet on High Peak in Burke County. The Catawaba River drains the north slopes of the range, while branches of the Broad River and First Broad River penetrate the region from the east and south.

In contrast to the Brushy Mountains, only a very small portion of the South Mountains has been cleared for agricultural use; and the bulk of the region is heavily forested with second growth communities of pine, pine-oak, oak-hickory, and cove hardwoods. Furthermore, a substantial part of the eastern half of the range is encompassed by the South Mountains Wildlife Management Area, a situation which promotes the maintenance of relatively undisturbed woodlands. Typical species that are common and form a major portion of the plant cover include the following: white pine (*Pinus strobus*), shortleaf pine (*P. echinata*), Virginia pine (*P. virginiana*), various hickories (*Carya* sp.), eastern hemlock (*Tsuga canadensis*), river birch (*Betula nigra*), American hornbeam (*Carpinus caroliniana*), beech (*Fagus grandifolia*), white oak (*Quercus alba*), chestnut oak (*Q. prinus*), red oak (*Q. rubra*), scarlet oak (*Q. coccinea*), blackjack oak (*Q. marilandica*), winged elm (*Ulmus americana*), yellow poplar (*Liriodendron tulipifera*), sassafras (*Sassafras albidum*), sweetgum (*Liquidamber styraciflua*), sycamore (*Platanus occidentalis*), black cherry (*Prunus serotina*), black locust (*Robinia pseudoacacia*), winged sumac (*Rhus copallina*), staghorn sumac (*R. typhina*), American holly (*Ilex opaca*), red maple (*Acer rubrum*), dogwood (*Cornus florida*), black tupelo (*Nyssa sylvatica*), flame azalea (*Rhododendron calendulaceum*), rosebay rhododendron (*R. maximum*), mountain laurel (*Kalmia latifolia*), Carolina silverbell (*Halesia carolina*), and white ash (*Fraxinus americana*).

STUDY TECHNIQUES

In a previous paper (Simpson, *Chat*, 32:1-4, 1968), I described the salient features of the summer bird populations of the Brushy Mountains; but there appears to be no information in the literature concerning the birds of the South Mountains. To fill this gap, I conducted field work in the region on 18 May 1968 and on 15, 16, and 17 June 1970; and the results of this survey are contained in the present paper. Most of the field work involved systematic exploration of existing roads and trails throughout the range, although limitations of time precluded any search for positive breeding evidence. Censuses were conducted on 16 and 17 June 1970 by stopping every .2 mile along the

Lower C.C.C. Road and Headquarters Road and listening for 4 minutes at each site. Total numbers of each species encountered during the surveys were used to establish four categories of relative abundance: uncommon, fairly common, common, and very common. Notations of habitat and elevation were made where appropriate.

SPECIES LIST

Turkey Vulture (*Cathartes aura*): Uncommon. All elevations.

Red-tailed Hawk (*Buteo jamaicensis*): Uncommon. All elevations.

Broad-winged Hawk (*Buteo platypterus*): Uncommon. All elevations.

Ruffed Grouse (*Bonasa umbellus*): Although no individuals were noted during the study, the manager of the Wildlife Management Area showed me several stuffed specimens and a number of wings from the range; and he informed me that the bird is fairly common in the region.

Bobwhite (*Colinus virginianus*): Uncommon. Lower elevations.

Mourning Dove (*Zenaidura macroura*): Uncommon. All elevations.

Yellow-billed Cuckoo (*Coccyzus americanus*): Uncommon. All elevations.

Chimney Swift (*Chaetura pelagica*): Fairly common. All elevations.

Ruby-throated Hummingbird (*Archilochus colubris*): Uncommon. All elevations.

Belted Kingfisher (*Megaceryle alcyon*): Uncommon. Lower elevations.

Yellow-shafted Flicker (*Colaptes auratus*): Fairly common. All elevations.

Pileated Woodpecker (*Dryocopus pileatus*): Fairly common. All elevations.

Hairy Woodpecker (*Dendrocopos villosus*): Uncommon. All elevations.

Downy Woodpecker (*Dendrocopos pubescens*): Fairly common. All elevations.

Great Crested Flycatcher (*Myiarchus crinitus*): Fairly common. All elevations.

Eastern Phoebe (*Sayornis phoebe*): Fairly common. All elevations.

Acadian Flycatcher (*Empidonax virescens*): Common. All elevations.

Eastern Wood Pewee (*Contopus virens*): Fairly common. All elevations.

Rough-winged Swallow (*Stelgidopteryx ruficollis*): Uncommon. All elevations.

Barn Swallow (*Hirundo rustica*): Uncommon. Lower elevations.

Blue Jay (*Cyanocitta cristata*): Fairly common. All elevations.

Common Crow (*Corvus brachyrhynchos*): Common. All elevations.

Carolina Chickadee (*Parus carolinensis*): Very common. All elevations.

Tufted Titmouse (*Parus bicolor*): Fairly common. All elevations.

White-breasted Nuthatch (*Sitta carolinensis*): Uncommon. All elevations.

Carolina Wren (*Thryothorus ludovicianus*): Fairly common. All elevations.

Mockingbird (*Mimus polyglottos*): Fairly common. All elevations.

Catbird (*Dumetella carolinensis*): Fairly common. All elevations.

Brown Thrasher (*Toxostoma rufum*): Fairly common. All elevations.

Robin (*Turdus migratorius*): Common. All elevations.

Wood Thrush (*Hylocichla mustelina*): Common. All elevations.

Blue-gray Gnatcatcher (*Polioptila caerulea*): Fairly common. All elevations.

White-eyed Vireo (*Vireo griseus*): Fairly common. Lower elevations.

Yellow-throated Vireo (*Vireo flavifrons*): Uncommon. Lower elevations.

Solitary Vireo (*Vireo solitarius*): Fairly common. Above 1,400 feet.

Red-eyed Vireo (*Vireo olivaceus*): Very common. All elevations. In a large series, the ratio of Red-eyed to Solitary Vireos is 10 to 1 through this range.

Black-and-white Warbler (*Mniotilta varia*): Fairly common. All elevations.

Swainson's Warbler (*Limnothlypis swainsonii*): The single record is of an adult male singing in the rhododendron-laurel thickets of Jacob Fork, Burke County, at 1,320 feet on 16 June 1970. A tape recording of the species' song was played; and the bird approached at close range, permitting visual confirmation of field marks.

Parula Warbler (*Parula americana*): Fairly common. All elevations.

Yellow Warbler (*Dendroica petechia*): Fairly common. Lower elevations.

Black-throated Green Warbler (*Dendroica virens*): Very common. All elevations. This

species was the most abundant warbler in the range, occurring most frequently in hemlock ravines but in other habitats as well.
Yellow-throated Warbler (*Dendroica dominica*): Uncommon. Lower elevations.
Pine Warbler (*Dendroica pinus*): Uncommon. Lower elevations.
Prairie Warbler (*Dendroica discolor*): Uncommon. Lower elevations in early successional stages.
Ovenbird (*Seiurus aurocapillus*): Common. 1,400 to 2,800 feet.
Louisiana Waterthrush (*Seiurus motacilla*): Uncommon. Lower elevations.
Kentucky Warbler (*Oporornis formosus*): Uncommon. All elevations.
Yellowthroat (*Geothlypis trichas*): Fairly common. Lower elevations.
Yellow-breasted Chat (*Icteria virens*): Uncommon. Lower elevations.
Hooded Warbler (*Wilsonia citrina*): Common. All elevations.
American Redstart (*Setophaga ruticilla*): Fairly common. All elevations.
Eastern Meadowlark (*Sturnella magna*): Fairly common. Lower elevations.
Red-winged Blackbird (*Agelaius phoeniceus*): Fairly common. Lower elevations.
Orchard Oriole (*Icterus spurius*): Uncommon. Lower elevations.
Common Grackle (*Quiscalus quiscula*): Fairly common. Lower elevations.
Brown-headed Cowbird (*Molothrus ater*): Uncommon. Lower elevations.
Scarlet Tanager (*Piranga olivacea*): Fairly common. All elevations.
Summer Tanager (*Piranga rubra*): Uncommon. Lower elevations.
Cardinal (*Richmondena cardinalis*): Fairly common. Lower elevations.
Rose-breasted Grosbeak (*Pheucticus ludovicianus*): The only record is of a single adult male singing at 2,800 feet on Skull Knob in Rutherford County on 16 June 1970.
Indigo Bunting (*Passerina cyanea*): Very Common. All elevations.
American Goldfinch (*Spinus tristis*): Fairly common. All elevations.
Rufous-sided Towhee (*Pipilo erythrophthalmus*): Common. All elevations.
Chipping Sparrow (*Spizella passerina*): Uncommon. Lower elevations.
Field Sparrow (*Spizella pusilla*): Fairly common. Lower elevations.
Song Sparrow (*Melospiza melodia*): Fairly common. All elevations.

DISCUSSION

A total of 66 species are documented as summer residents of the South Mountains, although no positive breeding evidence was noted for any of these birds. Of these 66 species, only five are generally regarded as montaine because their maximum density occurs in the Appalachian region. These five species, the Solitary Vireo, Black-throated Green Warbler, Ovenbird, Scarlet Tanager, and Rose-breasted Grosbeak, were also noted as summer residents in the Brushy Mountains during a previous study (Simpson, *Chat*, 32:1-4, 1968). However, the Slate-colored Junco (*Junco hyemalis*) and Chestnut-sided Warbler (*Dendroica pensylvanica*) were noted in the Brushies but are conspiciously absent from the South Mountains. Considering the higher elevations in the South Mountains, the absence of the junco is difficult to explain; but the Chestnut-sided Warbler may not find suitable habitat in the South Mountains, due to the relatively unbroken and mature forest canopy covering most of the range.

The occurrence of the Swainson's Warbler in the range is of interest. This species has not been reported in the Brushy Mountains, but it is known to occur as a summer resident on the outer slopes of the Blue Ridge Escarpment and portions of the western slopes of the Unaka Mountains. In these two ranges, the bird is associated with thickets of rhododendron and mountain laurel, and the single record from the South Mountains is from a similar habitat. Additional field work is needed to determine the status of this species in the South Mountains.

With the extensive tracts of fairly mature, uniform woodlands, the South Mountains provide an ideal locale for future studies of the breeding bird densities in several of the major plant communities of the Carolina piedmont.

P.O. Box 167, Statesville, N.C., 3 November 1971

CBC Roundtable

RECLAMATION OF A SOOTY SHEARWATER

F. M. (PAT) PROBST

On 11 and 12 June 1969 strong easterly winds blew great windrows of sea-weed and debris ashore along the coast of the Carolinas and Georgia. With this debris were hundreds of dead or dying sea birds identified as Greater Shearwaters, *Puffinus gravis.* Concerned people in the local area brought many of these birds to me for identification and for possible help. All living birds that I saw appeared to be paralyzed or toxic and died (in most instances in convulsions) within a few hours. Intermixed with the sea-weed and debris were many globs of a sticky, tarry material believed to be "Bunker C" type oil pumped from the bilges of ocean ships. The birds I examined did not appear to be heavily oiled, although some had smudges of this tarry residue on their breast and belly feathers.

Of particular interest however, was a Sooty Shearwater (*P. griseus*) brought to me by some visitors on Pawley's Island. This bird was more alert and did not appear to be as toxic as the Greater Shearwaters. He was able to hold his head up and exhibited curiosity by turning it to follow movement. At first silent and docile, he offered no resistance to handling. Examination revealed that his left leg was useless, although there was no evidence of injury or broken bones. Offered fresh water from a glass jar, he drank a small amount. He was offered small chunks of fresh fish and ate two or three pieces. He spent the night in a large cardboard box lined with newspapers, which was to be his home for five weeks.

The next morning a ration of cut fish was eagerly accepted and several pieces were eaten. My wife, Renée, who was to become Sooty's main support and comfort while he was with us, reasoned that chunks of fish and squid in a small jar of salted water could be more readily – and vigorously – eaten. This then became routine for up to six times daily as Sooty gained strength. Because of immobility, due to probable toxicity at first and because shearwaters are ill adapted for land, the newspapers in his box had to be changed quite frequently.

After each feeding and as his strength returned, Sooty was placed in a large laundry tub partially filled with water. At first he got wet thru to his skin and would be cold and shivering. While there was no apparent oil on his feathers they matted together and allowed water to penetrate to the skin. In a few days the bird began to preen, both in the water and after being placed in his box. He was kept in the water for only a few moments at first, to help clean his under feathers. Soon however, he indicated preference for longer periods in the tub and would bathe and preen while swimming around. Gradually his left leg acquired some use, although it never regained full use. The periods in the tub would be terminated by Sooty's attempts to get out of the water. Hooking his beak over the edge of the tub he would try to pull his body up and over the brim. As his strength returned he spread his wings and often succeeded in getting out unaided. To dry him off before returning him to his box we placed him on the gravel in our driveway or on the grass of our lawn. Sooty remained quiet for the first few days but then began trying to move about. He would extend his neck and pull himself forward with his long beak hooked in the gravel or the grass. He was soon able to progress for some distance in this way and with the help of his good right leg. He soon began using his wings in a swimming motion to help him move forward. To exercise his wings further we would hold him aloft with one hand extended beneath his breast while he would move his wings in a flying motion, slowly and weakly at first but more and more strongly. It soon became necessary to place the other hand on his back to keep him from falling from our grasp.

By the end of the third week Sooty had regained enough strength to move easily about the yard. He would attempt to fly and could become nearly airborne from the ground, moving quite rapidly for some distance. To prevent his escape into thick underbrush around our yard, we would have to retrieve him. It was on one of these attempts when he first exhibited aggressive behavior. As I bent over to pick him up he turned toward me and squawked quite loudly. After that he frequently used his voice to express his displeasure at being returned to his box. While he did not exhibit as much aggression against Renée as he did against me (possibly because she fed and handled him more), it eventually became necessary to drop a cloth over his head in order to pick him up without being vigorously pecked. On several occasions he would peck me on the wrist and twist his head at the same time. This resulted in a number of deep scratches caused by the sharp hook on the point of his upper mandible. Usually he did not close his beak as strongly on Renée as on me but would nibble on her hand and arm.

After about a month we realized that Sooty had regained enough strength to care for himself; so on 19 July we took him to a tidal inlet at Huntington Beach State Park for release. Placed at the edge of the water, he quickly moved into swimming depth. From here he became airborne and was able to fly very well, in great sweeping circles.

Because of the strength of his flight we feel that he was able to resume a normal life as a soaring ocean bird. Our hope is that he took a short-cut by way of Bermuda to catch up with other shearwaters, for he was over a month behind on the circular route that they take each year around the Atlantic Ocean, returning each winter to nesting territories in the Cape Horn area.

In spite of the close confinement and his inability to move about, there was relatively little odor about him or his box. He did have a faint but pronounced pleasant musky odor to his feathers that would linger on our hands for quite a while after we had handled him. He ate well, even from the first day, and was very definite in the amount he wanted. While we removed the larger bones from the fish we left the smaller ones in place. He was able to swallow cubes of fish up to one inch on a side, although they were generally smaller.

Caring for common land birds presents relatively minor problems. But the care of a bird who requires a more specialized diet and is restricted to a pelagic environment becomes more difficult for one not equipped for this special care. However, the pleasure gained, along with the hope that we may have saved a beautiful bird, is ample compensation.

Welcome Back, Toncie!

After several years of traveling and involvement in various other projects, Annie Rivers Faver is returning to the staff of *Chat* as editor of the CBC Roundtable. Having edited the Backyard Birding column for a number of years, Toncie needs no introduction to CBC members – just a warm welcome back! Items intended for the March Roundtable should be sent to Mrs. Faver at Route 2, Eastover, S.C. 29044.

Associate GFN Editor for South Carolina

Julian R. Harrison, our associate editor of the General Field Notes, is a native South Carolinian, having been born and reared in Charleston where he received a B.S. in Biology from The College of Charleston in 1956. Dr. Harrison received his A.M. from Duke University (*not* N.C. State as indicated in a previous issue of *Chat*) and his Ph.D.

(Continued on page 115)

Conservation

. . . with Marie Mellinger

The Least of These

At holiday time almost everyone is overflowing with goodwill to man, and a little of this goodwill laps over to the birds and animals. Many people follow the charming custom of a Christmas tree for the birds, or give the farm animals special treats in honor of the first Christmas. Pampered pets get holiday gifts just as if they were children. All of this is fine, but special thanks and appreciation, however, should go to those inidividuals and organizations who devote year-round time to working for the protection of all our birds and animals, and for those who spend their time and money helping the least of these, the waifs of the animal kingdom.

So this column gives special thanks to:

1. all the teen age members of the Kindness Club (called to our attention by Celestine Sibley), of New Brunswick, Canada, whose motto is that of Joseph Wood Crutch, "Conservation is not enough, the thing that is missing is love." Some of their golden rules are: "Respect and protect homes of animals, dens, nests, and food supplies." "Insist that wild life refuges be places where animals are safe or protected – not shooting galleries." "Hunt with a camera, as you would like to be hunted."
2. Hope Sawyer Buyukmichi of the Unexpected Wildlife Refuge, who has started an organization called The Beaver Defenders and a crusade to save the beavers. One beaver dam forming a pond benefits trout and restores ideal living conditions for other animals and birds. Beavers create miniature marshes and ponds suitable for wood ducks.
3. W. G. Duncan who gathers together news of wildlife, from bluebirds to bisons, and sends out all this information at his own expense. His motto: "By saving wildlife man may save himself."
4. *The Purple Martin Capital News*, the only newspaper in America that devotes itself exclusively to news of birds and animals and the humans who relate to them.
5. Harold Martin, whose column reflects great feeling for his furred and feathered friends, and especially for squirrels. He reports on the people who love animals.
6. National Audubon Society, Defenders of Wildlife, Save the Animals League, National Catholic Society for Animal Welfare, Canadian and American Wolf Defenders, and to all the Humane Societies who work with little money and much love to cope with the abandoned and unwanted creatures of this world. To the veterinarians who have formed the National Wildlife Health Foundation to provide information and health care of wildlife during an emergency, such as an oil spill.
7. To all the turtle toters who stop to carry a turtle safely across a highway, and to all the members of the save the snake league.
8. To the teen age Y.C.C. boy who brought in this Christina Rossetti poem for inclusion in the Y.C. C. Green Bough.

> "Hurt no living thing:
> Ladybug and butterfly,
> Nor moth with dusty wing,
> No cricket chirping cheerily,
> No grasshopper so light of leap,
> Nor dancing gnat, no beetle fat
> Nor harmless worms that creep."

An Appropriate Way to Celebrate?

In this year of the 100th anniversary of the celebration of the establishment of our first national park, there is legislation before the House of Representatives that is an ominous threat to national parks, refuges, seashores, forests, and the entire national domain. This is H.R. 7211, sponsored by Representative Wayne Aspinal. The bill would dilute protection of public lands and expose them to pressures to have land sold off, push commercial use, and make possible withdrawals up to 25,000 acres. This would leave the majority of public lands unprotected from mining and logging. Write your Congressman in Washington and let him know what you think about this bill. Do it now!

Footnote on the Chattooga River

Visited the Chattooga River with the idea of taking some pictures of the pristine river, on 29 October. This was where Hwy 76 crosses from Georgia to South Carolina. A large float convoy was preparing to embark, and there were innumerable sightseers. The river itself was almost a chocolate brown color, and the amount of filth, trash, and litter on both banks was appalling. People don't use the river, they abuse it!

A New Arrival

A flock of Monk Parakeets escaped from a cage at Kennedy Airport in 1969 and now appear to be well adapted to living conditions in North America. Birds of this South American species have been reported from Connecticut, Massachusetts, Pennsylvania, North Dakota, Michigan, and Virginia as well as in the New York-New Jersey area. Photographs taken in Buncombe County, N.C., and circulated by Bob Ruiz at the fall CBC meeting in Wilmington have been tentatively identified as being pictures of nesting Monk Parakeets. We hope to have a full report from Bob in the next issue of *Chat.* Meanwhile, keep your eyes open for these new arrivals at your feeder. They are medium-sized parakeets, greenish gray above with a lemon yellow belly. Flight feathers are blue-gray, tail bluish green, bill rosy flesh color.

For Holiday Reading and Giving

A Lifetime with the Birds, an Ornithological Logbook.
Earle R. Greene. Edwards Brothers Inc., 2500 South State Street, Ann Arbor, Michigan, $6.00.

Memoirs of a Naturalist. Herbert L. Stoddard Sr. University of Oklahoma Press, Norman, Oklahoma, $6.95.

Delightful reading and the perfect gift for anyone interested in birds, birding, or the all-time great naturalists of our area, these books are fine additions to any library. Earle Greene has over 600 birds on his life list, and his fascinating tales of quests after rare species make good reading. At one time he was manager of the Mattamuskeet National Wildlife Refuge, a member of the early Georgia Naturalist Club, and a founder of the Georgia Ornithological Society. The late Herbert Stoddard Sr. was an outstanding naturalist and wildlife expert, and his memoirs include very interesting accounts of a lifetime spent in the out-of-doors.

TVA Drops Plan for Dams on French Broad River

In mid-November 1972 the Tennessee Valley Authority announced abandonment of a plan that would have built 14 small dams on the upper French Broad River in western North Carolina. The brief statement attributed the decision to a lack of local government support, but the budget squeeze in Washington and mounting opposition from conservationists were also factors working against the project. The earthen dams would have created lakes ranging from 250 to 1,030 acres and would have flooded nearly 7,000 acres of bottomland, about half of it rich farmland.

General Field Notes

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Double-crested Cormorant in Western North Carolina

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5 December 1971

On 24 October 1971 my family and I were scanning Lake Julian, a large man-made lake in Buncombe County, N.C., when an unusual bird landed in the water. We watched it for about 45 minutes at a distance of approximately 400 yards with 7 x 50 binoculars and a 60X spotting scope. The all-black plumage and orange throat-spot clearly identified the bird as a Double-crested Cormorant (*Phalaerocorax aulitus*). Its behavior was also typical of a cormorant. The bird raised its wings and flapped several times and then held them in the air for 2 to 3 minutes.

Birds of North Carolina (1959) indicates that the only previous record for the Double-crested Cormorant from Buncombe County is a bird seen in 1889. I do not find any other records of the species from the mountains of North Carolina, although Stupka (*Notes on the Birds of the Great Smoky Mountains National Park*, 1963) mentions two cormorant sightings in eastern Tennessee, one at the mouth of Abrams Creek and another near Gatlinburg.

Reddish Egret at Pea Island NWR

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On 25 September 1971 while birding with a group of CBC members, I discovered a Reddish Egret (*Dichnomanassa lufescens*) in the brackish marsh just north of the north pond on Pea Island National Wildlife Refuge on North Carolina's Outer Banks. The bird was observed in good light through both binoculars and spotting scope.

The bird was a dark phase individual clearly larger than nearby Snowy Egrets (*Leucophoyx thula*). The body colors were typical of those described for this species with the long bushy head plumes, bill with pale base and dark tip clearly visible. In addition, it was observed feeding in the very nervous manner of this species, including a somewhat subdued sequence of "open wing feeding" as described by Meyerriecks (*Comparative Breeding Behavior of Four Species of North American Herons*, Nutthall Ornithological Club Publications, No. 2, 1960).

While it is recognized that there is much variation in this species and that at times separation from Little Blue Herons (*Florida cerulea*) is difficult, there seems no doubt that this was a Reddish Egret. Color photographs were secured and two have been submitted to the U.S. Fish and Wildlife Service National Photoduplicate File at Patuxent, Maryland. The photographs have been given acquisition numbers 198 ITa and 198-ITb.

This appears to be the second record of this southern wader in North Carolina. The first report was from near Charlotte on 27 July 1947 (*Chat*, 12:52, 1948). Two birds found in Berkely County, S.C., on 15 January 1934, represent the only published record of this species from South Carolina (*South Carolina Bird Life*, Sprunt and Chamberlain, 1970). The publication of this note and the placement of photographs in the National Photoduplicate File allow the Reddish Egret to be added to the official bird list for North Carolina.

A Second Hooded Merganser Brood in South Carolina

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A brood of Hooded Mergansers (*Lophodytes cucullatus*) was produced at Orangeburg National Fish Hatchery, Orangeburg, S.C. I saw a female with three young unable to fly on 2 June 1972. The brood was first seen in the hatchery's main reservoir pond two weeks earlier by Hatchery Manager Ted Dingley. At that time four young were present. No male was ever observed. The nesting site was not found, but nine Wood Duck boxes are located in the reservoir area. By 21 July 1972 the female had disappeared, but the three young remained and were observed flying from one hatchery pond to another (Ted Dingley, pers. com.).

This is the second positive instance of nesting by the Hooded Merganser in South Carolina. The first was reported by T. A. Beckett, who observed two young at Magnolia Gardens, Charleston County, in May 1967 (*South Carolina Bird Life*, 1970, p. 592). As one of these was secured for the Charleston Museum, no attempt was made to collect the hatchery birds, but on 2 June several recognizable photographs were made. During my attempts to photograph them, the young dove and disappeared from view for 30 minutes. The female scooted frantically across the reservoir in an apparent attempt to decoy me away from the brood.

Increased use of Wood Duck nesting boxes by Hooded Mergansers in states north of South Carolina raises the possibility of imprinting as a technique in promoting future Hooded Merganser nesting in this state.

Woodcock at Butner, N.C., in March

OWEN L. McCONNELL
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27 March 1972

On 21 March 1972 at 11:00 I observed three American Woodcock (*Philohela minor*) chicks near Butner, N.C. They were in a "freezing" defense in the middle of a paved road near a creek bottom. I approached on foot within 20 feet before noticing the long-billed Woodcock hen feigning injury at the edge of the woods. Before I could reach the young, a car passed over them, the backdraft tumbling them like bits of weightless fluff. They immediately resumed their "freezing" attitude and maintained it while I knelt beside them, observing them closely. They were unharmed and unmistakably Woodcocks because of their elongated bills and mottled downy plumage. They had not developed primary wing feathers. Fearing for their safety, I placed them on the shoulder of the road. They ran skillfully, with wings raised for balance. From growth characteristics cited by W. G. Sheldon in *The Book of the American Woodcock*, 1967, I estimated their age at about 1 week. I withdrew about 50 feet, and the hen quickly returned to her brood.

This sighting may be significant for two reasons: (1) the scarcity of Woodcock breeding records for North Carolina, and (2) the early date of hatching. Critcher and Quay (*Chat*, 17:62-68) found that nests or young Woodcocks had been reported in only 13 counties in North Carolina. To my knowledge no nests or juveniles have been recorded for Granville County. Considering the age of the chicks and the incubation period (Sheldon observed an incubation period of 21 days for one nest), egg laying in the present case might have occurred in late February. C. S. Brimley gives egg dates for Raleigh as 3 March to 11 April with an average of 24 March for 16 egg records. For the Sandhills region Skinner (*Chat*, 17:63) says, "The eggs are laid as early in some cases as the latter part of February, and I have seen young birds as early as the first week in April." Breeding, egg laying, and hatching vary with the latitude, elevation, and weather. The present observation is consistent with data suggesting relatively early reproduction in the North Carolina piedmont. In addition 21 March appears to be one of the earliest dates for observed young in the northern piedmont, perhaps attributable to the mild winter of 1971-1972.

Nesting of the Yellow-bellied Sapsucker in Great Craggy and Southern Great Balsam Mountains of North Carolina

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24 January 1972

Pearson, Brimley, and Brimley (1942) regarded the Yellow-bellied Sapsucker (*Sphyrapicus varius*) as a breeding summer resident in the higher mountains of North Carolina, but they mentioned only four specific localities where the bird had been observed: Roan Mountain, Highlands, Joannana Bald Mountain, and Greybeard Mountain. Elsewhere, the bird has been reported during summer in the Unicoi Mountains by Ganier and Clebsch (1944), the Great Smoky Mountains by Stupka (1963), and Mt. Mitchell by Burleigh (1941). To date, however, there appear to be no specific records from the Great Craggy or southern Great Balsam Mountains; and the following observations are therefore of interest.

SOUTHERN GREAT BALSAM MOUNTAINS: Based on my field work in this range from 1963 to 1971, the Yellow-bellied Sapsucker is an uncommon summer resident above 3,500 feet in deciduous forests that have been disturbed by logging or fires. During the months of May through August, I have a total of 16 records of individual birds at elevations from 3,600 feet to 5,800 feet. In addition to these individual sightings, groups of two or more birds have been noted at three localities in the range. At Wet Camp Gap (5,360 feet), Jackson County, a pair has been noted repeatedly in June 1963, 1965, and 1969, while on 15 June 1968 two adults were carrying food into a nesting hole some 25 feet up in a large white oak (*Quercus alba*). The cries of the young birds could be heard, but I was unable to climb the tree to examine the nest. In June 1963, 1965, and 1968 a pair was present at 5,540 feet on the eastern slope of Shining Rock, where the birds were seen entering and leaving a cavity in a yellow birch (*Betula lutea*). Although no evidence of eggs or young was noted at Shining Rock, an adult with two young was seen on 25 July 1969 just NW of Beech Gap, Haywood County at 5,400 feet.

GREAT CRAGGY MOUNTAINS: I have noted a pair at Craggy Gardens (5,300 feet) in June 1957, 1959, 1968, and 1969. During the first week of June 1957, two adults were carrying food into a nesting cavity 30 feet up in a white oak. I heard the cries of the young birds, although it was impossible to climb the tree for close examination. Elsewhere, I have noted pairs at Beetree Gap (4,900 feet) in June 1964 and 1969, at Sprucepine Ridge (4,200 feet) in June 1970, and on Craggy Dome (5,700 feet) in June 1957 and 1970.

In spite of the published records of the Yellow-bellied Sapsucker in western North Carolina, a great deal remains to be learned about the distribution of the bird in the area. Observers should be alert to document any breeding of the species in the region.

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Blue Jays Mob a Dead Common Grackle

PAUL A. STEWART
203 Mooreland Drive, Oxford, N.C. 27565
9 March 1972

During the morning of 20 February 1972 I heard Blue Jays (*Cyanocitta cristata*) screaming wildly in the small trees on the lawn of my home, and upon looking out the window I saw no cat where the birds were centered; thus, I watched the birds a few minutes and determined the exact spot receiving their greatest attention. After the mobbing behavior had stopped, I went to the spot and found a dead Common Grackle (*Quiscalus quiscula*). The head and tail of the grackle were buried beneath fallen pine leaves so that the exposed part of the dead bird gave little indication that the black object was a dead bird.

There was little reason to doubt that the dead grackle was the object of the Blue Jays' attention. Inasmuch as Blue Jays normally do not mob living grackles, it is noteworthy that these jays mobbed one that was dead and partly buried.

Two Instances of Apparent Sublimation of Sex Drive in Robins

ELOISE F. POTTER
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18 August 1972

While watching the birds in my yard near Zebulon, Wake County, N.C., for anting and sunbathing behavior during the cool and sunny days following the heavy rainfall associated with the passage of Hurricane Agnes, I noted an adult male Robin (*Turdus migratorius*) repeatedly mounting pine cones, waving his wings to keep his balance, and apparently attempting copulation. The bird alternately mounted several cones in rapid succession and sunbathed for about 30 minutes beginning at 06:30 EST. Following the last observed mounting, he flew to a tree and began singing. Later in the day (24 June 1972) I saw birds of other species sunning, but they did not mount pine cones.

On 25 June the banded adult male Robin that held territory on the east side of our house and had mounted pine cones the previous day attempted to mount his mate, but she was not receptive. On 28 June she was nest building, and on 2 July she was incubating. I saw the pair feeding young out of the nest on 1 August.

I believe that the mounting of pine cones was a sublimation of the male's sex drive. The Robins had lost their nest on 22 June, and apparently the male was ready to begin renesting activities before the female was ready for copulation.

About a dozen juvenile Robins no longer dependent upon their parents had flocked by 11 July. Rainfall began about noon on this date and continued off and on until clearing began about 09:30 on 13 July. By 09:50 Robins and several other species of birds had begun sunbathing, and they continued to do so frequently through the morning of 19 July.

The morning of 15 July the yard was full of juvenile Robins that were bathing in the pools and sunbathing. Between 08:00 and 09:00 several of these birds were chasing each other and bumping windows the way adults do during the mating season. They would interrupt their chases occasionally to mob other juvenile Robins sunning in the driveway. The mobbing behavior appeared to be an extension of the pursuit flights, and there was no attempt to injure the sunbathers. On one occasion several juveniles excitedly mobbed a flattened pine cone in the driveway near a place particularly favored for sunning. One of these birds, distinctive because of its bare forehead and somewhat advanced state of postjuvenal molt, left the group that had just mobbed the flattened pine cone and immediately attempted to mount an open cone that had not been crushed. This same bird continued to mount one cone after another for about 20 minutes. At 10:20 I saw a juvenile Robin, presumably the same bird, repeatedly mounting a pine cone in a distant part of the driveway. Again the mounting of pine cones appeared to be the sublimation of an ill-timed sex drive; however, in the latter instance this behavior, along with the pursuit flights and mobbing activity, might be considered a form of juvenile sex play.

For the next month (20 July through 17 August) I continued to watch the juvenile Robins closely. Although there were several periods of heavy rainfall during these 4 weeks and the birds frequently bathed at the pools, I saw no anting, only one sunning episode, no pursuit flights, no mobbing, and no pine cone mounting by either juvenile or adult Robins.

Adjustments of Blackbirds and Starlings to Shot Injuries

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At Scotland Neck, N.C., a large roosting congregation of birds was present during each of the recent falls and winters. The congregation contained Starlings (*Sturnus vulgaris*), Red-winged Blackbirds (*Agelaius phoeniceus*), and Common Grackles (*Quiscalus quiscula*). Gunmen often visited the roosting site to shoot the birds, and many birds were thus killed and crippled. When spending weekends at or near the roosting site during the falls and winters of 1970-1972, I saw numerous birds making adjustments to physical handicaps, at least some of the handicaps doubtless resulting from shooting.

The most striking adjustments were those made by birds deprived of their flight capabilities. Such birds normally remained in the woods occupied by the roosting congregation or near dense bushes at its edge. When feeding in the adjacent peanut field, they usually remained within 10 m of such escape cover and ran into the woods or bushes upon my approach, much too soon for me to be able to intercept them. Only once when they had foraged out from a less dense portion of the woods was I able to capture one Red-winged Blackbird and two Common Grackles by rushing toward them from within the woods. When in the dense bushes the birds often climbed quickly to the tops of the bushes where they watched their foiled pursuer. One incapacitated Common Grackle steadily climbed up a grapevine all of the way to the top of a tree about 18 m tall, remaining at the top of the tree during the following half hour that I quietly waited.

A short distance from the roosting site, at the barns of the Leland Kitchin Dairy Farm, a few birds were usually present. These birds, mostly Common Grackles, used the food wasted by the cattle and sought refuge from their would-be captors by flying into the nearby privet hedge. Other scattered birds remained all day in the vicinity of the roosting site, feeding on peanuts in the nearby fields or on food placed for other birds in Scotland Neck. The behavior of most of these birds clearly indicated injuries, but the behavior of some seemed normal, suggesting that not all were injured. Probably, though, all birds remaining throughout the day at or immediately outside the roosting site had physical handicaps, some of which were not apparent in field observations.

Those birds remaining near the roosting site were noticeably less gregarious than others of the same species not remaining there, particularly the Common Grackles. The Common Grackles feeding in the peanut field beside the roosting site often fed widely scattered over the field; whereas, those feeding at a greater distance from the roost usually fed in much more closely organized flocks.

Most of the birds with distinctive afflictions which served to identify them survived only short periods of time.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N. C. 27514
(All dates 1972 except as noted)

COMMON LOON: Again this year summer stragglers were reported in the coastal waters of the Carolinas. An individual was seen in the Cape Fear River off Southport, N. C., on 8 July by Richard A. Rowlett, and three were seen off Cape Lookout, N. C., by the same observer on 9 July. Ted Beckett found two dead birds, both in breeding plumage, washed ashore at Deveaux Bank near Charleston, S. C., on 24 June.

GREATER SHEARWATER: An individual was found dead at Morgan Island in the Cape Lookout channel on 18 June by Henry Haberyan, and another at Oregon Inlet on 24 June by Gilbert Grant.

SOOTY SHEARWATER: A single bird was closely observed resting in the waters off Cape Lookout lighthouse on 15 June by Gladys and George Smith and George Smith Jr.

AUDUBON'S SHEARWATER: One was seen at Cape Hatteras on 11 July by Richard A. Rowlett.

WILSON'S PETREL: At least 100 were seen at Cape Lookout Bight on 3 June by Josiah Bailey, as reported by John Fussell. An onshore sighting of an individual was recorded at Rich's Inlet near Wrightsville Beach, N. C., 20 June by Robert Soots, James Parnell and Jay Carter. Two were also seen by Parnell and Carter at Carolina Beach 27 June, and five were noted off Cape Point at Cape Hatteras, N. C., on 11 July by Richard Rowlett.

BROWN PELICAN: A count of 287 pelicans was recorded from the Fort Fisher ferry in the Cape Fear River near Southport, N. C., on 8 July, Richard Rowlett.

GANNET: A sub-adult was seen off the tip of Cape Lookout on 9 July, Richard Rowlett.

DOUBLE-CRESTED CORMORANT: Two were uncommon visitors at Roanoke Rapids Lake, Halifax County, N. C., 15 June, Chris Marsh and Merrill Lynch. Sixteen seen at Morehead City, N. C., on 21 June was an unusually high summer count for that coastal locality, John Fussell and Donald McCrimmon.

ANHINGA: Spring and early fall sightings were recorded well northward along the North Carolina coast, with an individual seen 15 April near Point Harbor on Currituck Sound by Plumer Wiseman and Fenton Day, and another at Pea Island on 11 August by Betty Lancaster et al. As many as 50 breeding pairs of Anhinga were noted by Evelyn Dabbs in May and June at a previously unreported nesting site on Lake Marion near Lone Star Landing in Calhoun County, S. C. The birds were nesting amidst a large and thriving Cattle Egret colony.

MAGNIFICENT FRIGATEBIRD: One was seen flying over Doe Hall Plantation, McClellanville, S. C., on 23 June by Jay Shuler.

LITTLE BLUE HERON: An early post-breeding-season wanderer was recorded at Raleigh, N. C., where Chris Marsh found an immature bird at Greenview Farm on 20 June. Another was found at North Wilkesboro, N. C., on 26 June by Wendell Smith.

CATTLE EGRET: Uncommon summer occurrences were noted at several inland locations following the nesting period. A single bird was sighted in Nash County, N. C., 5 miles NE of Bailey on 19 July by Henry Haberyan; three birds were seen near Raleigh on 3 August by Harry LeGrand and Ross Silcock; and four were found near Ringwood in Halifax County, N. C., on 9 August by Merrill Lynch.

COMMON EGRET: Dispersal into the piedmont after the nesting season resulted in the locally unusual appearance of a flock of 20 at a small pond near Clemmons, N. C., on 29 July (Marie Larsen, fide Ramona Snavely). Several other individuals were sighted in the Winston-Salem area during the period 13 through 18 July as reported by Alan Snavely, Diana Gorin, Robert Witherington, and Charles Frost. Several summer records were also reported from Buncombe County, N. C., where five Common Egrets were seen 2 July in Candler (Mrs. Roy L. Wilson), one at Swannanoa 10 July (Betty Ruiz), one near Black Mountain 15 July (Robert Ruiz), and one at the Biltmore Estate near Asheville on 11 August (William Cecil). Elsewhere Merrill Lynch noted five on 10 August at Roanoke Rapids, N. C.

LOUISIANA HERON: One was an uncommon visitor at Roanoke Rapids on 1 August, Merrill Lynch.

WHITE IBIS: Two immature birds were seen at Wildwood Lake in Caswell County, N. C., on 16 June by Plumer Wiseman. At other inland North Carolina locations, 40 immatures were seen flying over St. Pauls in Robeson County on 15 June by Jay Carter, and a single individual was seen at Kerr Lake in Vance County on 22 July by Haven and Minna Wiley.

GADWALL: An early fall migrant was observed at Raleigh on 10 August by Ross Silcock.

BLUE-WINGED TEAL: Three were sighted in North River Marsh, Carteret County, N. C., on 3 July by John Fussell.

GREEN-WINGED TEAL: Censuses of summering waterfowl at the West Onslow Beach impoundment, Onslow County, N. C., by Gilbert Grant and Edward Hudson showed a mated pair and a single male of this species present on 28 May and 12 June. However, there were no definite signs of nesting.

AMERICAN WIDGEON: A male and female, apparently paired, were seen at West Onslow Beach, N. C., on 28 May by Gilbert Grant and Edward Hudson.

RING-NECKED DUCK: One was present throughout the summer at Huntley's Impoundment in Carteret County, N. C., as noted by John Fussell.

LESSER SCAUP: Gilbert Grant and Edward Hudson found nine present at West Onslow Beach Impoundment, Onslow County, N. C., on 12 June and five were still present on 8 July. There was no evidence of nesting.

COMMON SCOTER: Three males were seen in the surf off Huntington Beach State Park in South Carolina on 5 June by Frederick Probst.

RUDDY DUCK: A late straggler was seen at Raleigh on 24 May by Edmund and Harry LeGrand.

BLACK VULTURE: For the third consecutive year, a pair was found nesting at Umstead State Park near Raleigh, N. C., by Edmund and Harry LeGrand. Two young were successfully reared.

MISSISSIPPI KITE: One was sighted well north of its normal range on 15 June in Northampton County, N. C., near the Roanoke River just 20 miles below the Virginia line by Merrill Lynch and Chris Marsh.

COOPER'S HAWK: Two juveniles, obviously not long out of the nest, were observed in Edgefield County, S. C., on 16 July by Calvin Zippler and Gerald Knighton Jr.

MARSH HAWK: A late lingerer was seen near Stumpy Point in Dare County, N. C., on 4 June by Gilbert Grant.

OSPREY: Uncommon inland sightings for June were reported from Raleigh, N. C., where two birds were seen at Lake Benson on 10 June by Bryan Taylor and Alan

Eakes, and from Roanoke Rapids, N. C., where a single bird was seen on 15 and 19 June by Chris Marsh and Merrill Lynch.

PEREGRINE FALCON: One was seen on 5 August at Julian Price Memorial Park on the Blue Ridge Parkway, Watauga County, N. C., by Henry Haberyan.

SPARROW HAWK: Several sightings were reported during the last half of July and early August from six localities near the fall line. The specific records were: two birds at Roanoke Rapids on 16 July and one in the Occoneechee Neck area of Northampton County, N. C., on 18 July (Merrill Lynch); one at Aberdeen on 26 July and two at Lobelia on 31 July in Moore County, N. C. (Jay Carter); one at Chapel Hill on 2 August (James Pullman); and two in the vicinity of Aiken, S. C. on 27 July (Gerald Knighton). It is noted that all of these sightings occurred after the species' normal nesting period, indicating that the birds may have been early fall migrants rather than summer residents. No breeding records from the piedmont and coastal plain have been reported recently.

AMERICAN COOT: Up to 300 were present at the freshwater impoundment at West Onslow Beach, N. C., in mid-June, and 96 were still there on 8 July as reported by Edward Hudson and Gilbert Grant; however, there were no definite signs of nesting.

PIPING PLOVER: Several pairs were regularly observed in the Beaufort, N. C., area from late May through June and were believed to be nesting as evidenced by their strong territorial behavior, John Fussell.

WILSON'S PLOVER: Over 100 were counted along the length of Shakleford Bank on 8 July by John Fussell. The same observer also counted 98 in a loose flock on Bird Shoal off Morehead City, N. C., on 20 July.

AMERICAN WOODCOCK: Four were observed on 15 June at Fort Macon State Park near Atlantic Beach, N. C., by John Fussell. Merrill Lynch flushed two in Hoggard Swamp near Windsor, Bertie County, N. C., on 5 July. Summer records from the coast and coastal plain have been quite rare.

LONG-BILLED CURLEW: One was found on Shakleford Bank off Beaufort, N. C., on 17 July by John Fussell, and two were seen and photographed together on the tidal flats of Portsmouth Island, N. C., on 3 August by Richard Rowlett.

WHIMBREL: The presence of fall migrants was noted in the Beaufort-Morehead City, N. C. area as early as 22 June and at least 70 were counted on Shakleford Bank 8 July, John Fussell.

SPOTTED SANDPIPER: At least 50 early migrants were present on Shakleford Bank on 8 July, John Fussell.

WILLET: Three were found inland at Roanoke Rapids Lake, Halifax County, N. C., on 12 June, by Merrill Lynch.

LESSER YELLOWLEGS: A migratory flock of 40 was found by John Fussell on Shakleford Bank 8 July.

KNOT: Summer occurrences of a single bird on 24 June and 7 July at Bird Shoal off Morehead City, N. C., were reported by John Fussell.

PECTORAL SANDPIPER: An early fall migrant was seen at Shakleford Bank on 8 July by John Fussell.

WHITE-RUMPED SANDPIPER: Four late spring migrants were found inland at Raleigh, N. C., on 31 May and one on 3 June by Chris Marsh. A migrant or summer straggler was seen on the coast at Pea Island, N. C., on 24 June by Gilbert Grant, and two were present at Bird Shoal off Morehead City, N. C., 2 to 4 July as noted by John Fussell.

LEAST SANDPIPER: An individual was recorded inland at Whispering Pines, N. C., on 12 July by Jay Carter.

STILT SANDPIPER: One was seen at Raleigh, N. C., on 28 July by Ross Silcock and Chris Marsh. Along the coast at least 10 fall migrants were seen at Morehead City by John Fussell on 18 July, and 35 were counted at Pea Island on 14 August by Jackson Abbott and David Abbott.

SEMIPALMATED SANDPIPER: Late spring migrants were recorded at Raleigh, with four noted at Greenview Farms on 31 May, and one still present on 3 June, Chris Marsh.

WESTERN SANDPIPER: Four were early and unusual inland fall visitors at Raleigh, N. C., on 24 July, Ross Silcock and Chris Marsh.

BUFF-BREASTED SANDPIPER: Chris Marsh and Ross Silcock found one present at Lake Raleigh, Raleigh, N. C., on 27 July.

WILSON'S PHALAROPE: An individual was seen several times during the period 8 July through 19 July at Shakleford Bank by John Fussell. This is believed to be the first local record for Carteret County, N. C.

NORTHERN PHALAROPE: Three were seen on mud flats at the north end of Portsmouth Island, N. C., 10 July by Richard Rowlett.

LONG-TAILED JAEGER: A single bird in light-phase plumage was observed under good conditions in waters off Cape Lookout, N. C., in the vicinity of WR6 buoy on 13 May by Henry Haberyan.

LAUGHING GULL: An adult was sighted inland at Roanoke Rapids, N. C., on 2 June by Merrill Lynch.

FORSTER'S TERN: One in winter or immature plumage was seen at Lake Wheeler near Raleigh, N. C., on 10 June by Chris Marsh. Gilbert Grant again noted small numbers of summering birds on the North Carolina coast in the Alligator Bay area, highlighted by an observation on 8 July of three young juveniles thought to be of local origin.

SOOTY TERN: One was sighted over Shackleford Bank, Carteret County, N. C., on 17 July by John Fussell.

BLACK TERN: Sightings of early fall migrants were noted at Morehead City, N. C., on 24 June (John Fussell) and at Wrightsville Beach, N. C., on 6 July (Jay Carter). Later, a record local count for Morehead City was recorded on 14 August when John Fussell saw an estimated 200 birds gathering to roost on Elijah Lump.

GROUND DOVE: The first definite nesting record for New Hanover County, N. C., has been reported by Ronald Outen, who saw an adult fly away from a nest containing three eggs at Fort Fisher on 5 August. Another observer, Plumer W. Wiseman, has provided information from his field notes for the past several years giving evidence of regular nesting on Sunset Beach Island in Brunswick County, N. C. He specifically cites the discovery of a nesting bird incubating two eggs on 20 July 1970 and states that two nests have been found since then.

BLACK-BILLED CUCKOO: An unusual late spring occurrence was recorded at Raleigh, N. C., where an individual was studied closely on 12 June by Pamela Wilcox and Chris Marsh.

TRAILL'S FLYCATCHER: On 29 May, Edmund and Harry LeGrand found a bird of the "fee-be-o" song type singing at Price Park on the Blue Ridge Parkway near Blowing Rock, N. C.

TREE SWALLOW: Jay Carter reported seeing an immature bird at Whispering Pines, N. C., on 26 July, an early and uncommon fall occurrence for that locality.

COMMON RAVEN: Five birds were seen on 30 May at Pilot Mountain in Surry County, N. C., by Edmund and Harry LeGrand, and three were seen at Hanging Rock, Stokes County, N. C., on 27 June by Alan Eakes and Robert Teulings. These sightings give rise to speculation about the local breeding status of the species at these northern piedmont sites, but so far no nesting evidence has been found.

FISH CROW: At Raleigh, N. C., a pair was found nesting in April by Edmund LeGrand, the first positive evidence of breeding in Wake County.

CEDAR WAXWING: Two were seen at Raleigh on 11 June by Chris Marsh and William Brown Jr.

WARBLING VIREO: Several singing males were noted in Ashe County, N. C., along the south fork of the New River in early June by Chris Marsh and William Brown Jr. Very little is known about the current breeding status of this species in the North Carolina mountains.

BLACK-AND-WHITE WARBLER: A female was seen at Moore's Creek Battleground in Pender County, N. C., on 28 June by Jay Carter.

PROTHONOTARY WARBLER: Two definite breeding records were reported from Forsyth County, N. C., this summer by Robert Witherington, Charles Frost, Olive Boice and Ramona Snavely. This team of observers found two adults feeding young in a nest at Salem Lake on 8 June. Later, along the Yadkin River near Hwy 67, they saw another pair feeding young on 10 August.

SWAINSON'S WARBLER: A male was found singing at Kitty Hawk, N. C., on 23 June by Gilbert Grant.

WORM-EATING WARBLER: A male was seen and heard at White Oak Pocosin in western Gates County, N. C., on 13 June by Merrill Lynch.

YELLOW WARBLER: James Pullman found a nesting pair in May at Mason Farm in Chapel Hill, N. C., an uncommon local breeding record.

AMERICAN REDSTART: Singing males were common along the Roanoke River in the Occoneechee Neck area of Northampton County, N. C., in mid-June, as reported by Merrill Lynch and Chris Marsh. A male was also seen in Hertford County along the Meherrin River near Winton on 11 June by Merrill Lynch.

BOBOLINK: A lone male, apparently a very tardy spring transient, was seen near High Point, N. C., on 21 June by James Mattocks.

RUSTY BLACKBIRD: A late spring straggler was observed in the company of grackles in swamp habitat along the Roanoke River in the Occoneechee Neck area of Northampton County, N. C., on 16 June by Merrill Lynch and Chris Marsh.

BALTIMORE ORIOLE: A rare incidence of nesting in the North Carolina piedmont was recorded in Forsyth County where a pair was found feeding young in Tanglewood Park near Clemmons on 4 June by Paul Spain.

WESTERN TANAGER: A female tanager with clearly distinct white wing bars was observed for 10 minutes while perched on a power line at Black Mountain, N. C., on 19 July by Earl and Elizabeth Chandoin.

SCARLET TANAGER: On 11 June two males were seen in Gates County, N. C., in the upper coastal plain by Merrill Lynch. Sightings were also recorded by the same observer in Northampton County, N. C., in June and July.

BACHMAN'S SPARROW: A singing male was noted near Arcola in Warren County, N. C., on 4 June by Harry LeGrand.

SONG SPARROW: One found at Roanoke Rapids, N. C., on 22 July was an unexpected summer record for that locality, Merrill Lynch.

CBC ROUNDTABLE

(Continued from page 103)

from the University of Notre Dame in 1964. He is presently an Associate Professor of Biology at The College of Charleston where he teaches Introductory Biology, Vertebrate Zoology, Ornithology, and Zoogeography. Having served as a volunteer worker at The Charleston Museum since 1949, Dr. Harrison was recently appointed by the Museum Board as a Research Associate in Herpetology.

In 1960 Harrison married the former Margaret N. Marquardt of Sayville, N.Y., whom he met while studying at Duke. Margaret holds a master's degree from Duke where her research dealt with biochemical embryology, and she is currently Curator of Education at The Charleston Museum. The Harrisons have two children, Charles Andrew (Andy), age 9, and Susan Gayle, 7, both of whom are enthusiastic young naturalists.

Julian credits his own wide interests in natural history to the influence of E. Burnham Chamberlain, former Curator of Vertebrate Zoology at the Museum, who guided his early training in ornithology and herpetology, and to Miss Elizabeth Simons, the former Curator of Education who directed the Nature Trailers club.

Although Dr. Harrison greatly enjoys bird study, his professional research interests lie with the biology of amphibians and reptiles, their systematics, life histories, population ecology, and evolution. He will be on sabattical leave next spring to complete a book on the amphibians of South Carolina.

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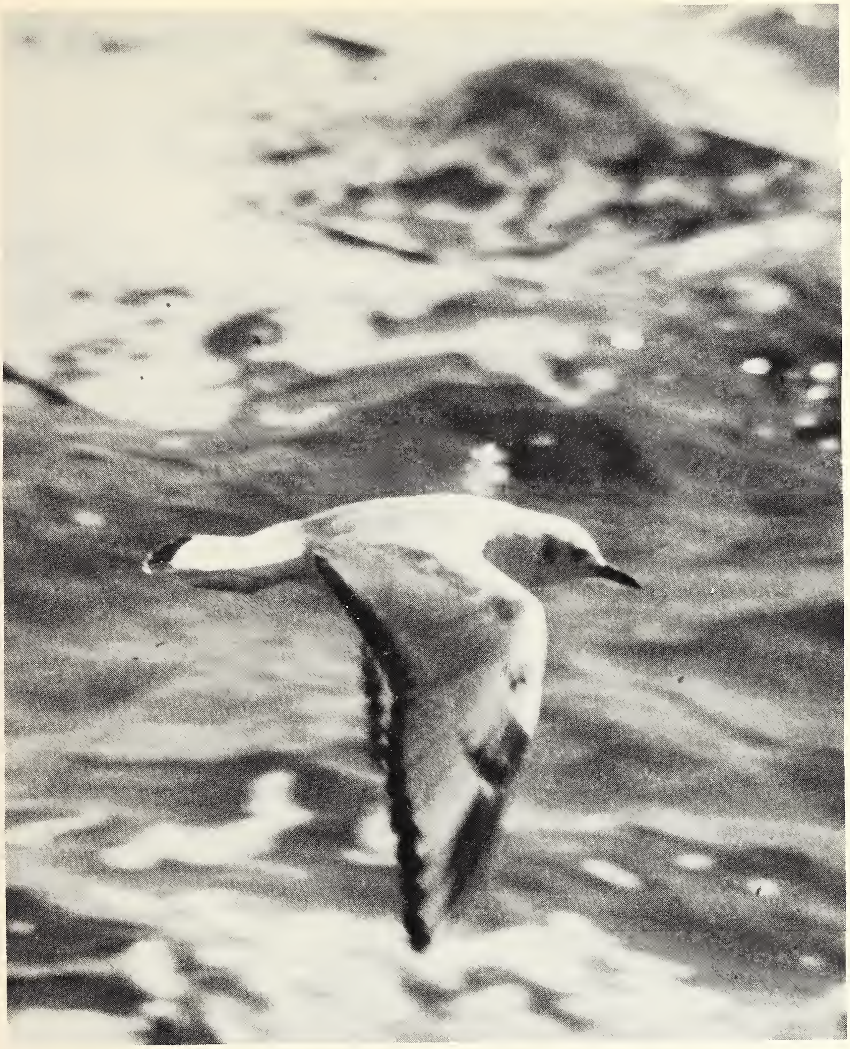

The Chat

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The Chat

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OUR COVER—James F. Parnell photographed an immature Bonaparte's Gull in flight. This bird is representative of more than 35,000 gulls tallied by CBC participants in the record-breaking 1972 Christmas Bird Count.

LONG-BILLED DOWITCHER IDENTIFICATION

HARRY E. LeGRAND JR.

The scarcity of Long-billed Dowitcher (*Limnodromus scolopaceus*) records in North Carolina is primarily due to the difficulty in separating this species from the more common Short-billed Dowitcher (*Limnodromus griseus*). Although Grant and Browne (1970) summarized the status of both species in the state, their paper dealt with the distribution of the two species rather than with the methods used for identifying the two. The purpose of this paper is to discuss several techniques which are useful in separating the Long-billed Dowitcher (hereafter designated LBD) from the Short-billed Dowitcher (hereafter SBD), using both the data collected by Edmund LeGrand and me and material published elsewhere by others who have studied both species in detail.

1. VISUAL FIELD MARKS–In the spring the LBD is considerably darker rusty colored on the underparts than the SBD. At all seasons the LBD is more streaked and barred on the breast and belly, whereas the SBD is often spotted or devoid of markings underneath (Robbins et al., 1966; Easterla, 1970). Since the LBD is apparently rare on the Atlantic coast in the spring and the breast and belly coloration is greatly reduced in the fall, we have found the barred underparts the most useful plumage field mark on fall birds. The bills of many LBD are noticeably longer than those of the SBD (hence the common names). Although some LBD can probably be identified by bill length alone, the fact that bill lengths of shorebirds vary considerably within species makes identification by this character alone tricky and generally not conclusive. Our observations on bill lengths agree with those of Small (1958) and Ogden (1964).

2. CALL NOTES–In the opinion of those ornithologists who have recently studied LBD, the only sure way to identify the LBD is by its call. Much has been presented in the literature (see Small, 1958; Buckley and Buckley, 1967; and Ogden, 1964) about the validity of its call note in separating it from the SBD, and our observations compare favorably with the literature. The LBD call is a single note, "keet" or "peep," or a short series of this note. Since we have on occasions seen this species in tight flocks, the calls of the flock when flushed are very distinctive and reminiscent of young chicks or a chorus of frogs. Ogden (1964) states:

> "While *griseus* [SBD] very rarely calls except as they are flushed, *scolopaceus* [LBD] will continue to give their 'peep' notes as they fly around after taking flight. Several times I have identified LBD in the air by hearing their regularly uttered 'peep' notes even before the flock was close enough to identify the bird by sight as Dowitcher."

On the other hand, the SBD call, as is well known, is similar to that of the Lesser Yellowlegs (*Totanus flavipes*) and can be described as "too-too" or "too-too-too," almost always in a series of single notes. The SBD calls are the only ones we have heard given by birds on salt-water mudflats along the North Carolina coast, whereas we have heard both species in the fresh and brackish ponds on the Outer Banks.

3. HABITAT AND HABITS–All of the LBD we have ever seen were found in fresh-water or brackish-water areas, and most of these have been on impoundments. This preference for fresh-water has been noted by many other observers, and Buckley and Buckley (1967) have found that in southeastern Virginia the LBD is found on fresh- or brackish-water pools, especially after 1 October. This habitat preference is a very helpful character in the identification of LBD. The SBD is primarily a bird of the salt-water mudflats and sandflats. It also occurs regularly in fresh-water areas and often outnumbers the LBD in a given impoundment where both are present, especially in the

spring. The points to remember are that any dowitcher seen in a salt-water habitat is almost certainly a SBD, but that both species can occur together in fresh or brackish areas.

I have noticed that the LBD seems to feed in deeper water than does the SBD. At the Bodie Island lighthouse pond the water level has been so high on one or two occasions that only American Avocets (*Recurvirostra americana*), Greater Yellowlegs (*T. melanoleucus*), and LBD have been seen feeding there. Both species of dowitchers feed in fairly tight groups. Mixed flocks are apparently not unusual, and in several of the flocks of LBD we have studied there have been a few SBD, based on call notes of flushed birds.

4. PERIODS OF MIGRATION—The SBD is well known as an early fall migrant along the Atlantic coast. The peak of its migration is in July and August, even though many birds remain to winter on the North Carolina coast. In the spring the species is a late migrant, often becoming abundant along the coast from late April into June. For example, we recorded about 4,000 SBD at Bodie-Pea Islands on 16 and 17 May 1970 and about 400 there on 13 through 15 June 1971. On the other hand, several observers have mentioned that the LBD is an early spring and a late fall migrant in the eastern United States. Urner and Storer (1949) recorded only two LBD in the spring in their study area on the northern and central New Jersey coast during a 10-year period, one bird each on 18 April and 2 May 1937. In the fall they found that the principal period of migration for the LBD was between 19 September and 27 October, with high counts on 27 September, 10 October, and 13 October. Conversely, their data showed that the principal movements of SBD occurred between 4 May and 25 May and between 6 July and 24 August. Buckley and Buckley (1968) consider the LBD a regular but rare spring migrant in southeastern Virginia, with records between 20 April and 5 May. In the fall they found it to be an uncommon migrant between the dates of 15 September and 1 November. We have not seen LBD in the spring, and the species appears to be rare along most of the Atlantic coast during this season. However, the LBD is definitely more common along the Atlantic coast in the fall than in the spring. My brother and I have recorded this species on the Outer Banks of North Carolina on seven occasions in fall and winter. Our LBD records are as follows:

15+	26 September 1971	Bodie Island
50+	3 October 1970	Bodie Island
1	11 October 1969	Bodie Island
30	30 October 1971	Pea Island
1	14 November 1970	Pea Island
40	30 December 1971	Bodie Island
12	30 January 1971	Pea Island

These sightings agree with those of other published records in that the LBD is definitely a late fall migrant. Although the latter two observations are winter records, the LBD is apparently not a regular winter resident on the Outer Banks or elsewhere in North Carolina.

SUMMARY

There are several techniques which are helpful, if not necessary, for distinguishing between the Long-billed Dowitcher (LBD) and the Short-billed Dowitcher (SBD). The best field mark for the LBD is a single "keet" call note or a series of the same, whereas the SBD has a rapid "too-too" or "too-too-too" call note. Other helpful points in separating the two species are that the LBD has a slightly longer bill than the SBD, somewhat more barred underparts in the fall, a preference for fresh- and brackish-water areas rather than salt-water areas, and a later period of migration in the fall (after mid-September, as compared to a migration peak in July and August for the SBD).

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Conservation

. . . with Marie Mellinger

YOUTH AND CONSERVATION

JAMES W. REINIG, Guest Columnist

If one looks at today's active "ecology" groups, one will notice that most of them have something in common: they are usually primarily composed of and run by young people. This is interesting when one realizes that many people consider the youth of today to be apathetic to "old" ideas such as conservation. So why should the young people of this nation be so concerned with ecology and conservation? By examining the motives of various ecology groups the answer can be easily discerned.

Ecology related groups today range in interests from old-fashioned conservation to such modern concepts as material recycling and pollution and pesticide control. However, all of these groups have the same general purpose, that is to guard and protect our natural heritage, even though they go about it in many different ways.

Organizations like the Nature Conservancy try to gain immediate protection of land and wildlife by buying blocks of land and setting up nature sanctuaries. Recycling groups have a more farsighted approach. They try to get the maximum use from a natural material, paper or aluminum for example. Their logic is that the more paper or aluminum one can use over, the fewer trees that will have to be cut down or the smaller amount of land that will have to undergo the ravaging effects of mining. Some eco-groups serve as watchdogs over polluting cities and factories. One of the largest and most active conservation groups is made up solely of young people. The six million members of the Boy Scouts of America are dedicated to protecting nature and promoting conservation.

Many people are "ecologists" on their own, that is not belonging to any organization. Most of the volunteers to clean up the effects of oil spills, for example, are just individuals that want to lend a hand in cleaning up our environment.

The uniting idea among all these groups is always to try to protect nature from the assaults of man. It is to fight for our natural heritage so that following generations might have the opportunity to enjoy it also.

When one realizes the latter purpose of these groups, the answer to our question becomes obvious. It is the young people who are going to live in this environment for the next half century or so. They do not want to be forced to breathe polluted air and drink dirty water in the 21st century. They want their children to have the same chance to enjoy nature that they had.

The reason is not so cloudy after all. Young people regard ecology and conservation as a matter of survival – their own.–1014 Stanton Drive, North Augusta, S.C. 29841.

[James W. Reinig is an Eagle Scout and one of four young men from North Augusta, S.C., who received Hornaday Award Medals from the Boy Scouts of America for their outstanding contribution to conservation in working for protection of birds of prey in South Carolina. A 1972 honor graduate of North Augusta High School, Jim is currently a freshman at Harvard University. Jim's paper on the nesting habits of Red-cockaded Woodpeckers received a first place award in the biological sciences from South Carolina Junior Academy of Sciences in 1972. As a result of his scholastic ability and achievements in conservation, Jim has received a grant from the Explorer's Club of New York City, which he plans to use in the summer of 1973 to study the natural history of Nepal. We are truly proud to have young men like Jim Reinig working to make our world a better place to live in this century and the next.—ED.]

What Happened to Arbor Day?

April has three holidays that should be celebrated in all of our schools and by all bird, botany, and conservation groups. The first holiday was Arbor Day. The idea for a special tree planting day originated with J. Sterling Morton, and the date of the first Arbor Day was 10 April 1872. Arbor day became part of the spring school schedule in Ohio, New York, Illinois, Indiana, Wisconsin, and Michigan, where the children studied trees and took part in special programs and tree planting ceremonies. Some of these states even printed a glossy publication on nature and conservation for the use of the schools. Birdsey Northrup of Connecticut traveled and lectured on the need for the conservation of trees and the Arbor Day concept.

What happened to Arbor Day? Perhaps we need a modern day Northrup. Edward P. Cliff, of the U.S. Forest Service wrote, "trees are increasingly recognized as a vital asset in soil and water conservation and in upgrading the quality of the whole environment. The potential benefits are many, cooling shade, better air to breathe, protection from winds, habitat for birds and wildlife, a pleasant and serene environment, and an increase in natural beauty." Arbor Day was such a simple idea, perhaps we need to return to a simple idea in our complex society.

Bird Day was an offshoot of Arbor Day, and originated in Pennsylvania in 1894. It was sometimes celebrated on the second Friday in April, but more often combined with Arbor Day as Arbor and Bird Day. Trees and birds definitely go together. An important part of every Arbor Day was putting out birdhouses. This again is a simple concept that should gain more importance today. David H. Kennemur, of Spartanburg, S.C., wrote, "One small nestbox for bluebirds, a better world for Mankind."

All birders everywhere should combine and lobby to make 26 April a national holiday! Why? Because that is the birthday of John James Audubon. What better time for a birder to be born than April, when the air is alive with bird wings, and the morning chorus of bird song fills the air? In the Audubon opera, *Mirror for the Sky*, Jessamyn West wrote, "He painted himself in every picture so he would never die." But much greater than any of the Audubon bird paintings is the movement he started, or that started in his name, a movement that has grown from merely looking at birds, to preserving their habitat, to a total concept of the bird, the tree, and the environment.

Plant a tree and put up a birdhouse! A simple thing for each person to do. Multiply this by thousands and make this a better world.

Special Note

By this time most of you have probably viewed *Deliverance*, or at least seen the film clips on television. The picture was partially filmed on the Chattooga River, but the beauty of the river is obscured by the violence of the action. The constant theme is that of "man as a natural killer who must conquer nature." It would be more fitting and more in keeping with the beautiful river if man learned to live with it instead of against it!

CBC Roundtable

. . . with Annie Rivers Faver

Another Possible Explanation for Anting

I was very much interested in the article in the March 1972 issue of the *Chat* – "What on Earth is Anting?". I have observed it only one time. Last 19 August (1971) I noticed a Catbird that was anting in my backyard and returned to get my wife to come see it. When we returned to the yard, the bird had flown to a low branch in a holly tree, but soon returned to the ground and continued behaving as described in the *Chat.* I failed to record the time of day, but believe it was about the middle of the afternoon.

On this particular occasion, the ground was alive with swarming ants – both winged and without wings. I do not know the name of the variety of ants, but I know from past experience that this particular variety carries the strong, distinct odor of citronella, which was used for years as a mosquito repellent until more effective synthetic repellents replaced it.

I quote from the article: "The most intensive anting took place within 48 hours after rainfall during and following prolonged wet spells in August, such as those associated with the passing of tropical storms." Prolonged wet spells would certainly be a good time for mosquitos. Until it is proved or disapproved, I believe that anting is done to repel mosquitos, which is at least as logical as the other reasons submitted.–FRED S. HILL JR., 2750 Country Club Road, Winston-Salem, N.C. 27104, 29 May 1972.

Are There Any Records of Birds Feeding on Mushrooms?

Every morning I throw baby-chick scratch feed and sunflower seeds out of my kitchen window, as well as supplying the two window feeders. This had been a week of continual fogs and rain, and there were clusters of brown or light tan mushrooms on the stump of the pecan tree and along through the grass where the roots of the tree had been near the surface. In checking on the feeding birds, I noticed one White-throated Sparrow scratching and feeding on the cap of one of the mushrooms. I called Kay Sisson in Columbia and asked if she had ever heard of such a thing. She suggested that possibly there were insects or worms in the cap. So I went outside . . . the bird had gone by then . . . but there was no sign of insect life, although the top of the cap had been broken by the bird's scratching and the inside had been pecked like a bird would feed on a slice of bread. It had been feeding vigorously, and apparently enjoying the feast.

From my book, the Golden Press issue on "Non-flowering Plants" by Shuttleworth and Zim, I chose the picture of the "Jack-O'-Lantern" or *Deceiving Clitocybe* as most closely resembling the mushrooms. Many of the mushrooms were torn up and scattered, but I never did see anything else feeding on them. I have seen squirrels eating the common white "button" mushrooms along the edge of the woods along the driveway. –ANNIE RIVERS FAVER, Route 2, Box 4, Eastover, S.C. 29044.

A Question About Brown Creeper Behavior

Regarding the feeding behavior of the Brown Creeper, A.C. Bent comments in his *Life Histories of North American Nuthatches, Wrens, Thrashers, and Their Allies*: "We think of the creeper as always climbing upward over the bark in a straight or spiral course until, after reaching a fair height on the trunk, he drops to the base of another tree to ascend it in like manner. This is his ordinary way of feeding, but he often varies it. We may sometimes see him take a short hop backward to reinvestigate a crevice in the bark, or take a hop sideways to broaden the field of his research, and, as we have noted under "Nesting," a bird may visit a slender branch and even perch on it, and he may also hitch along the underside of a horizontal branch, his back to the ground." Nowhere does Bent offer an explanation for the fact that creepers sometimes spiral and sometimes do not, nor for their apparent preference for the underside of horizontal limbs, although he seems fascinated by this particular aspect of their feeding behavior.

Our home is located in a mixed pine and deciduous woods, and the house has vertical fir siding with a stain finish. Nearly every winter we have a resident Brown Creeper that feeds on insect goodies in crevices of our siding as well as in the bark of our trees. This winter we have made a special effort to note whether the bird ever feeds in full sunlight. We have watched our creeper move straight up the shady side of one tree after another without ever visiting the sides in full sun. We have watched the bird move up various planks on the house, carefully avoiding those in full sun. When feeding on the shady side of the house, the bird will go up one plank and fly to the base of the adjacent one. We have watched it spiral tree trunks on overcast days, and once it spiraled into dappled sunlight on a sunny day. Sometimes the bird will zigzag up the shady side of a tree, venturing to the very edges of the sunlight but never moving into it. Once I watched a creeper foraging on the underside of a horizontal limb that turned sharply downward about 10 feet from the main trunk of an oak. When the bird reached the bend and would have had to move into full sunlight had it continued out the same branch, it returned to the trunk and moved to the shaded underside of the limb above.

Although such factors as wind direction or the relative abundance of insect larvae on the north side of trees might have influenced our Brown Creeper, we presently believe that the bird avoids full sunlight because its protective coloration is more effective in shade than in sun. The fact that creepers freeze at the approach of danger tends to support our theory.–ELOISE F. POTTER, P.O. Box 277, Zebulon, N.C. 27597, 25 January 1973.

CORRECTION: Spring Bird Count—1972

J.H. Carter III has called the Editor's attention to an unfortunate error in the Southern Pines, N.C., column of the species table for the 1972 Spring Bird Count (*Chat*, 36:77). The numbers for Killdeer (3), American Woodcock (1), Spotted Sandpiper (7), Solitary Sandpiper (5), Greater Yellowlegs (3), and Lesser Yellowlegs (1) were printed one space too high. This results in erroneous listings for Wilson's Plover, Ruddy Turnstone, Upland Plover, and Willet (which were not found at Southern Pines) and for the Greater and Lesser Yellowlegs (both of which were found). The original copy for the table was correct, so the total individuals column is printed correctly. Only the Southern Pines column should be altered in your copy of the September 1972 *Chat*, page 77.–ED.

CHRISTMAS BIRD COUNT 1972		COAST						COASTAL PLAIN						PIEDMONT													MTN.				
	Total Individuals	Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 31 December	Wilmington, N.C. 16 December	Litchfield-Pawley's Is., S.C. 20 December	Charleston, S.C. 30 December	Hilton Head Island, S.C. 28 December	Beaufort Co., N.C. 31 December	Pamlico Co., N.C. 21 December	Southern Pines, N.C. 26 December	Dillon, S.C. 26 December	Columbia, S.C. 16 December	Aiken, S.C. 24 December	Roanoke Rapids, N.C. 1 January	Henderson, N.C. 27 December	Raleigh, N.C. 23 December	Chapel Hill, N.C. 31 December	Greensboro, N.C. 30 December	Winston-Salem, N.C. 30 December	Iredell Co., N.C. 1 January	Stanly Co., N.C. 30 December	Charlotte, N.C. 30 December	Greenville, S.C. 30 December	Elkin-Ronda, N.C. 24 December	North Wilkesboro, N.C. 16 December	Caldwell Co., N.C. 29 December	Avery Co., N.C. 28 December	Yancey-McDowell Co., N.C. 16 December	Buncombe Co., N.C. 30 December	Brevard, N.C. 30 December	Great Smoky Mtn. Natl. Park, 31 December
Common Loon	376	69	46	207	15	4	24	—	4	—	—	—	—	4	1	—	—	2	—	—	*	—	—	—	*	—	—	—	—	—	—
Red-throated Loon	652	96	3	502	35	—	16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Red-necked Grebe	1	—	—	*	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Horned Grebe	323	13B	20	26	12	25	22	—	16	5	—	—	—	13	7	6	—	27	—	—	1	—	—	—	3	1	—	—	1	—	—
Pied-billed Grebe	444	B9	13	B6	19	39	12	5	5	17	4	3	6	36	2	21	10	40	12	—	2	1	3	2	2	—	—	10	4	1	—
Brown Pelican	97	—	2	2B	5	9	53	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gannet	1,060	436	350	273	*	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
D.-cr. Cormorant	2,393	11	1,505	609	4	101	163	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Anhinga	12	—	—	1	1	1	9	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Great Blue Heron	424	34	103	67	20	30	67	4	4	2	2	2	4	30	3	10	10	10	3	1	15	1	—	1	—	—	1	—	—	—	—
Green Heron	3	1	1	*	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Little Blue Heron	69	13	5	—	11	4	36	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cattle Egret	13	—	3	2	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Egret	249	32	6	80	29	17	80	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Snowy Egret	183	23	9	59	12	11	69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Louisiana Heron	122	21	11	42	23	11	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black-cr. Night H.	30B	65	207	13	5	16	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow-cr. Night H.	2	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least 8ittern	2	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Bittern	12	9	1	1	—	1	—	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Glossy Ibis	25	11	—	—	—	2	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White Ibis	179	—	*	141	17	4	17	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whistling Swan	354	283	—	—	1	17	—	27	25	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
Canada Goose	4,450	2,250	—	19	60	—	*	—	—	—	—	—	—	1,417	—	2	—	6	371	—	6	19	—	300	—	—	—	—	—	—	—
Brant	162	162	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Wh.-fronted Goose	2	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—
Snow Goose	6,000	6,000	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blue Goose	11	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ross' Goose	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mallard	2,171	246	4	40	506	80	38	25	8	16	—	4	—	19B	—	300	17	292	184	—	15	7	—	100	*	—	11	45	35	*	—
Black Duck	1,586	720	20	9	500	75	6	—	12	5	—	—	—	64	—	8	—	33	82	—	7	—	—	40	—	—	—	5	—	—	—
Gadwall	283	160	—	11	10	57	10	—	—	2	—	—	—	2	—	17	—	8	4	—	—	2	—	—	—	—	—	—	—	—	—
Pintail	3,949	3,900	1	16	—	30	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Teal	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Green-winged Teal	3,317	2,950	115	31	1	200	7	—	—	—	—	—	—	2	—	3	—	1	—	—	—	6	—	1	—	—	—	—	—	—	—
Blue-winged Teal	140	10	*	23	—	102	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
American Widgeon	1,513	269	50	24	503	502	35	—	—	*	—	—	—	81	—	21	—	—	4	—	20	4	—	—	—	—	—	—	—	—	—
Shoveler	748	432	*	12	—	300	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—
Wood Duck	264	1	*	B1	2	63	5	—	—	5	*	10	3	56	—	21	—	1	2	2	—	—	—	—	—	—	—	10	—	2	—
Redhead	285	230	20	—	*	—	10	—	—	—	—	—	—	13	—	7	—	1	—	—	—	—	—	—	—	—	—	1	3	—	—
Ring-necked Duck	1,243	79	101	13	1	98	50	—	—	136	—	34	2	18	2	191	—	354	102	—	13	1	—	—	—	—	—	4	44	—	—
Canvasback	940	3B5	*	10	294	150	—	72	9	—	—	—	—	2	—	8	—	—	4	—	4	2	—	—	—	—	—	—	—	—	—

		COAST						COASTAL PLAIN						PIEDMONT													MTN.				
CHRISTMAS BIRD COUNT 1972	Total Individuals	Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 31 December	Wilmington, N.C. 16 December	Litchfield-Pawley's Is., S.C. 20 December	Charleston, S.C. 30 December	Hilton Head Island, S.C. 28 December	Beaufort Co., N.C. 31 December	Pamlico Co., N.C. 21 December	Southern Pines, N.C. 26 December	Dillon, S.C. 26 December	Columbia, S.C. 16 December	Aiken, S.C. 24 December	Roanoke Rapids, N.C. 1 January	Henderson, N.C. 27 December	Raleigh, N.C. 23 December	Chapel Hill, N.C. 31 December	Greensboro, N.C. 30 December	Winston-Salem, N.C. 30 December	Iredell Co., N.C. 1 January	Stanly Co., N.C. 30 December	Charlotte, N.C. 30 December	Greenville, S.C. 30 December	Elkin-Ronda, N.C. 24 December	North Wilkesboro, N.C. 16 December	Caldwell Co., N.C. 29 December	Avery Co., N.C. 28 December	Yancey-McDowell Co., N.C. 16 December	Buncombe Co., N.C. 30 December	Brevard, N.C. 30 December	Great Smoky Mtn. Natl. Park, 31 December
Greater Scaup	123	12	2	8	—	—	100	—	—	*	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lesser Scaup	1,678	71	8	13	—	—	1,093	233	187	4	—	—	—	8	—	7	*	38	6	2	—	—	—	—	—	—	—	8	*	—	—
Scaup (sp. ?)	312	—	—	5	—	304	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—
Com. Goldeneye	246	239	*	1	2	—	—	—	—	*	—	—	—	1	—	*	—	1	—	—	—	—	—	—	—	—	—	2	—	—	—
Bufflehead	1,778	1,500	4	47	3	13	76	—	—	2	1	—	—	10	—	73	—	8	—	—	—	13	—	—	—	—	—	28	—	—	—
Oldsquaw	65	63	*	—	—	—	2	—	—	—	—	—	—	—	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
White-wing. Scoter	116	116	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Surf Scoter	1,060	980	—	—	77	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Scoter	261	200	*	4	25	—	32	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Scoter (sp. ?)	48	—	5	28	10	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ruddy Duck	2,479	113	200	2	13	306	3	500	978	33	1	—	—	1	—	230	—	88	2	—	—	6	—	—	—	—	—	3	—	—	—
Hooded Merganser	294	37	3	79	9	54	55	—	—	—	*	—	—	16	—	20	—	14	—	—	—	—	—	—	—	—	—	—	—	7	—
Com. Merganser	12	7	—	—	—	—	4	—	—	—	—	—	—	—	—	—	*	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Red-br. Merganser	3,484	2,500	130	821	15	1	15	—	1	*	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
Turkey Vulture	236	—	9	13	2	57	72	*	—	1	1	—	1	46	1	2	11	—	*	10	2	2	—	—	—	—	—	2	—	—	4
Black Vulture	232	—	2	2	4	55	107	—	—	—	—	3	4	40	1	—	4	2	—	—	2	—	1	—	—	—	—	—	—	—	5
Sharp-shinned H.	41	12	1	7	4	1	2	—	—	*	—	—	—	6	—	2	*	1	*	1	—	—	—	—	1	1	1	—	—	1	—
Cooper's Hawk	28	—	*	1	—	3	1	3	2	—	—	1	1	2	1	—	—	4	1	—	2	—	—	—	—	—	2	—	3	—	1
Red-tailed Hawk	253	4	1	30	4	6	43	1	4	4	4	27	6	16	10	10	10	17	5	13	3	13	1	—	—	—	3	4	7	2	5
Red-shouldered H.	56	1	1	3	6	6	10	—	—	1	—	2	4	4	—	3	2	3	1	1	3	2	—	—	—	—	—	1	1	—	1
Broad-winged H.	3	—	—	—	1	1	*	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Rough-legged H.	3	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—
Bald Eagle	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Marsh Hawk	104	21	1	22	3	7	14	—	4	—	2	15	—	5	—	—	2	2	—	1	2	2	1	—	—	—	—	—	—	—	—
Osprey	8	—	—	2	1	1	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pigeon Hawk	9	5	—	1	1	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sparrow Hawk	347	30	9	40	13	13	79	21	19	5	1	16	11	14	3	6	2	8	5	5	5	2	1	1	—	1	16	7	6	5	3
Ruffed Grouse	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8	7	—	5
Bobwhite	897	14	*	19	20	17	139	37	4	16	6	22	57	47	17	84	37	38	12	10	172	44	—	8	8	—	—	10	6	23	30
Ring-nk. Pheasant	35	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Turkey	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—
King Rail	26	21	—	1	—	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Clapper Rail	193	26	5	23	19	21	99	—	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Virginia Rail	16	14	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sora	21	4	1	2	13	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow Rail	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black Rail	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Gallinule	43	2	3	7	9	16	5	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Coot	3,875	900	80	222	262	533	16	6	19	38	—	36	1	—	—	1,555	2	57	11	—	15	—	21	—	—	—	—	100	1	—	—
Am. Oystercatcher	433	—	54	102	16	181	80	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Semip. Plover	207	6	4	106	16	6	69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Piping Plover	101	31	22	4	2	—	42	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

CHRISTMAS BIRD COUNT 1972		COAST						COASTAL PLAIN						PIEDMONT													MTN.				
	Total Individuals	Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 31 December	Wilmington, N.C. 16 December	Litchfield-Pawley's Is., S.C. 20 December	Charleston, S.C. 30 December	Hilton Head Island, S.C. 28 December	Beaufort Co., N.C. 31 December	Pamlico Co., N.C. 21 December	Southern Pines, N.C. 26 December	Dillon, S.C. 26 December	Columbia, S.C. 16 December	Aiken, S.C. 24 December	Roanoke Raoids, N.C. 1 January	Henderson, N.C. 27 December	Raleigh, N.C. 23 December	Chapel Hill, N.C. 31 December	Greensboro, N.C. 30 December	Winston-Salem, N.C. 30 December	Iredell Co., N.C. 1 January	Stanly Co., N.C. 30 December	Charlotte, N.C. 30 December	Greenville, S.C. 30 December	Elkin-Ronda, N.C. 24 December	North Wilkesboro, N.C. 16 December	Caldwell Co., N.C. 29 December	Avery Co., N.C. 28 December	Yancey-McDowell Co., N.C. 16 December	Buncombe Co., N.C. 30 December	Brevard, N.C. 30 December	Great Smoky Mtn. Natl. Park, 31 December
Wilson's Plover	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Killdeer	915	14	35	68	2	—	77	48	106	21	23	44	26	112	—	43	41	17	5	20	31	36	3	—	*	—	2	—	6	3	132
Am. Golden Plover	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bl.-bellied Plover	836	266	32	440	24	8	66	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ruddy Turnstone	249	5	37	8	10	31	158	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Am. Woodcock	39	3	6	5	—	4	*	—	—	1	—	—	—	1	—	12	3	—	1	2	—	—	—	—	—	—	—	—	—	1	—
Common Snipe	273	45	72	6	22	8	8	—	2	6	2	—	—	23	—	5	2	10	3	—	19	33	—	4	—	—	—	—	—	—	3
Whimbrel	3	—	—	1	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Spotted Sandpiper	12	—	—	—	—	—	11	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Willet	350	63	28	112	24	25	98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Greater Yellowlegs	89	22	11	47	2	4	2	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Lesser Yellowlegs	10	8	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Knot	33	—	30	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Purple Sandpiper	32	—	1	1	—	—	30	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Sandpiper	103	8	4	9	—	—	82	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dunlin	5,894	2,300	1,512	871	63	5	1,143	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Short-billed Dow.	302	10	62	220	—	—	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Long-billed Dow.	9	8	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dowitcher (sp. ?)	28	—	—	—	8	20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Semip. Sandpiper	838	153	87	468	11	50	69	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Western Sandpiper	442	29	16	215	8	65	109	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Marbled Godwit	121	24	3	33	—	57	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sanderling	1,430	453	320	157	23	1	476	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
American Avocet	58	58	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pomarine Jaeger	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parasitic Jaeger	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Gr. Bl.-backed Gull	1,175	927	156	86	—	1	—	2	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Herring Gull	14,809	1,800	10,200	2,184	92	21	467	1	5	—	—	—	—	7	—	—	—	—	—	—	32	—	—	—	*	—	—	—	—	—	—
Ring-billed Gull	19,646	2,300	8,400	1,680	189	28	547	75	96	*	—	210	—	5,722	163	1	*	55	*	—	145	35	—	—	*	—	—	—	—	—	—
Laughing Gull	157	36	8	65	3	1	44	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bonaparte's Gull	310	169	3	94	3	—	27	—	—	—	—	—	—	—	—	—	—	8	—	—	—	6	—	—	—	—	—	—	—	—	—
Little Gull	*	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bl.-legged Kittiwake	2	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forster's Tern	1,620	1,329	42	134	9	1	105	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Common Tern	10	6	—	—	—	—	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Least Tern	2	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Royal Tern	221	39	6	166	—	—	9	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Caspian Tern	37	—	—	22	2	1	12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black Skimmer	173	—	32	138	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ringed Turtle Dove	10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10	—	—	—	—	—	—	—	—	—	—	—	—
Rock Dove	1,130	—	9	95	10	—	—	11	*	2	15	—	57	29	41	118	27	228	41	—	23	158	32	7	—	34	—	8	174	11	—
Mourning Dove	4,821	95	11	189	13	70	692	79	14	178	102	16	61	496	11	123	247	309	223	31	125	442	6	116	3	107	86	285	455	157	79

CHRISTMAS BIRD COUNT 1972		COAST						COASTAL PLAIN						PIEDMONT													MTN.				
	Total Individuals	Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 31 December	Wilmington, N.C. 16 December	Litchfield-Pawley's Is., S.C. 20 December	Charleston, S.C. 30 December	Hilton Head Island, S.C. 28 December	Beaufort Co., N.C. 31 December	Pamlico Co., N.C. 21 December	Southern Pines, N.C. 26 December	Dillon, S.C. 26 December	Columbia, S.C. 16 December	Aiken, S.C. 24 December	Roanoke Rapids, N.C. 1 January	Henderson, N.C. 27 December	Raleigh, N.C. 23 December	Chapel Hill, N.C. 31 December	Greensboro, N.C. 30 December	Winston-Salem, N.C. 30 December	Iredell Co., N.C. 1 January	Stanly Co., N.C. 30 December	Charlotte, N.C. 30 December	Greenville, S.C. 30 December	Elkin-Ronda, N.C. 24 December	North Wilkesboro, N.C. 16 December	Caldwell Co., N.C. 29 December	Avery Co., N.C. 28 December	Yancey-McDowell Co., N.C. 16 December	Buncombe Co., N.C. 30 December	Brevard, N.C. 30 December	Great Smoky Mtn. Natl. Park, 31 December
Ground Dove	61	—	2	1	42	2	14	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Barn Owl	10	4	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	1	—	—	—	—	—	1	—	—	—	—	—
Screech Owl	36	3	1	2	—	—	*	—	2	1	—	—	2	5	—	5	—	1	8	2	—	1	—	—	—	1	1	1	—	—	—
Great Horned Owl	29	1	*	3	—	4	2	—	1	—	—	—	2	3	—	2	2	—	5	1	1	—	—	—	*	—	1	—	—	1	—
Barred Owl	26	—	2	2	—	7	1	—	—	1	—	—	—	6	—	1	1	—	1	—	2	1	—	—	*	—	—	—	—	1	—
Long-eared Owl	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Short-eared Owl	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whip-poor-will	1	1	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Belted Kingfisher	325	30	8	31	26	33	55	4	8	5	1	2	4	3	2	10	9	9	7	1	17	7	1	—	—	4	7	10	12	9	10
Yellow-sh. Flicker	1,441	83	27	125	38	142	263	32	21	21	24	39	25	221	7	80	47	66	39	15	31	34	7	12	2	10	3	3	12	7	5
Pileated Woodp.	194	—	3	3	7	42	31	8	5	1	2	5	11	22	—	—	1	1	5	3	2	*	—	3	*	4	2	6	10	8	9
Red-bellied Woodp.	691	14	2	34	29	67	83	5	7	16	1	10	20	109	3	29	28	62	52	5	27	40	3	9	—	10	1	7	3	7	8
Red-headed Woodp.	75	—	—	3	6	4	15	6	—	3	—	11	1	4	—	*	1	1	2	—	12	5	—	—	—	1	—	—	—	—	—
Yel.-bell. Sapsucker	383	3	2	16	6	43	44	*	1	7	4	18	14	26	11	17	15	21	36	2	24	5	7	9	2	9	3	10	14	2	12
Hairy Woodpecker	142	—	1	3	1	8	9	*	*	3	1	1	2	16	—	6	7	12	15	3	7	5	1	3	1	3	7	3	13	6	5
Downy Woodpecker	561	12	4	10	5	25	13	1	*	11	3	2	10	62	8	21	30	54	29	1	38	29	4	7	*	14	20	21	72	38	17
Red-cock. Woodp.	21	—	2	—	5	7	—	1	—	4	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern Phoebe	130	1	2	7	6	6	6	—	4	4	1	—	7	8	1	8	15	—	3	1	5	2	1	1	1	—	1	16	14	2	7
Horned Lark	778	—	—	—	—	—	—	—	—	36	—	—	—	602	—	—	10	7	3	22	90	5	3	—	—	—	—	—	—	—	—
Tree Swallow	182	—	*	166	—	—	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
Blue Jay	3,834	9	6	185	419	358	609	30	39	68	19	94	89	261	35	132	165	238	102	20	204	214	64	12	6	95	51	28	187	70	25
Common Raven	11	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	1	1	—	2
Common Crow	3,182	14	6	12	21	155	387	4	—	2	*	24	43	123	28	68	175	305	56	30	137	48	12	105	22	29	179	328	628	113	128
Fish Crow	1,021	47	50	430	255	18	186	—	—	—	—	—	—	35	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bl.-capped Chickadee	†	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†
Carolina Chickadee	3,215	25	14	73	18	80	133	15	6	33	5	23	58	179	14	90	122	210	102	24	275	207	8	23	4	69	244	432	339	166	224
Tufted Titmouse	1,704	1	8	36	56	50	18	11	5	36	7	9	29	94	12	67	92	122	85	11	173	89	12	7	4	90	66	105	150	153	106
White-br. Nuthatch	398	—	—	—	—	14	3	1	—	6	—	4	9	13	—	1	27	41	28	3	41	3	1	4	1	22	41	5	61	49	20
Red.-br. Nuthatch	189	5	—	1	—	3	3	—	—	9	2	—	—	5	1	11	1	17	5	6	32	15	—	1	—	2	23	7	5	2	33
Brown-hd. Nuthatch	432	9	6	17	32	98	6	7	2	37	6	3	14	11	1	10	28	47	18	4	48	26	—	2	—	—	—	—	—	—	—
Brown Creeper	114	2	2	2	2	11	1	—	—	2	—	—	—	11	2	7	8	17	5	1	2	3	3	—	—	—	6	7	5	3	12
House Wren	87	33	3	32	1	3	1	*	—	1	—	—	1	4	—	1	—	—	—	2	—	—	—	—	—	—	—	—	—	5	—
Winter Wren	118	14	2	9	1	21	3	—	—	6	1	1	2	21	—	5	*	2	2	—	5	3	—	1	1	—	2	6	3	—	7
Carolina Wren	1,378	106	20	55	29	106	76	3	5	27	3	31	48	105	8	93	81	93	55	7	80	90	3	15	6	20	13	24	85	49	42
Long-bill. Marsh W.	46	27	7	8	—	—	1	3	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Short-bill. Marsh W.	117	98	3	8	—	3	4	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mockingbird	1,734	51	9	68	24	51	176	7	13	35	44	69	24	76	36	77	75	230	152	37	154	165	22	12	1	23	5	11	38	20	29
Catbird	211	147	3	8	6	20	12	1	1	3	2	—	2	1	—	1	—	—	—	1	—	—	—	—	—	—	—	1	2	—	—
Brown Thrasher	370	19	4	33	21	87	23	3	1	11	2	22	13	29	3	24	12	6	2	—	28	5	2	1	—	—	1	6	6	4	2
Robin	20,753	795	1,404	3,395	48	411	644	267	150	164	43	68	1,627	8,480	70	27	138	62	412	32	343	223	38	391	1	438	124	13	477	408	60
Wood Thrush	3	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hermit Thrush	162	14	1	7	1	23	16	1	—	3	3	—	9	23	—	8	3	1	3	1	25	2	—	3	1	1	2	2	5	1	3

CHRISTMAS BIRD COUNT 1972	Total Individuals	COAST						COASTAL PLAIN						PIEDMONT													MTN.				
		Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 31 December	Wilmington, N.C. 16 December	Litchfield-Pawley's Is., S.C. 20 December	Charleston, S.C. 30 December	Hilton Head Island, S.C. 28 December	Beaufort Co., N.C. 31 December	Pamlico Co., N.C. 21 December	Southern Pines, N.C. 26 December	Dillon, S.C. 26 December	Columbia, S.C. 16 December	Aiken, S.C. 24 December	Roanoke Rapids, N.C. 1 January	Henderson, N.C. 27 December	Raleigh, N.C. 23 December	Chapel Hill, N.C. 31 December	Greensboro, N:C. 30 December	Winston-Salem, N.C. 30 December	Iredell Co., N.C. 1 January	Stanly Co., N.C. 30 December	Charlotte, N.C. 30 December	Greenville, S.C. 30 December	Elkin-Ronda, N.C. 24 December	North Wilkesboro, N.C. 16 December	Caldwell Co., N.C. 29 December	Avery Co., N.C. 28 December	Yancey-McDowell Co., N.C. 16 December	Buncombe Co., N.C. 30 December	Brevard, N.C. 30 December	Great Smoky Mtn. Natl. Park, 31 December
Swainson's Thrush	2	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Eastern Bluebird	979	—	1	4	8	37	224	2	7	45	15	11	53	63	—	30	50	28	34	13	88	50	14	38	4	16	7	22	57	38	20
Bl.-gr. Gnatcatcher	7	—	—	3	—	2	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Golden-cr. Kinglet	1,165	6	20	27	6	9	3	—	*	25	5	2	29	74	8	105	80	70	21	8	22	52	—	8	2	16	78	201	172	27	89
Ruby-cr. Kinglet	1,458	23	8	62	41	290	52	4	1	38	9	37	104	86	6	112	36	37	14	11	348	35	7	4	2	29	—	13	12	9	28
Water Pipit	641	5	*	27	—	—	28	—	—	7	—	—	30	199	—	170	75	—	—	—	100	—	—	—	—	—	—	—	—	—	—
Cedar Waxwing	2,867	42	12	29	—	—	142	—	—	1	*	4	64	157	167	138	136	2	48	—	126	393	24	218	—	71	21	2	999	66	5
Loggerhead Shrike	194	—	1	5	*	9	32	1	1	8	5	9	16	7	2	9	4	17	4	14	17	18	4	2	—	2	—	1	2	1	3
Starling	580,855	484	167	974	264	157	51	112	77	680	72	290	1,840	5,046	338	54,193	1,001	5,307	920	656	881	1,869	250	615	66	279	297	205	502,917	125	722
White-eyed Vireo	5	—	—	—	1	4	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Solitary Vireo	29	—	*	6	2	6	13	—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—
Black-and-white W.	13	—	—	1	—	1	8	—	—	—	—	—	—	1	—	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
Orange-crowned W.	7	2	*	2	—	2	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Parula Warbler	1	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Myrtle Warbler	11,837	6,860	533	1,208	643	1,216	727	12	140	29	8	7	50	178	7	37	20	25	38	2	27	13	—	—	—	—	—	—	11	1	45
Yellow-throated W.	11	—	—	1	—	7	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pine Warbler	787	2	1	14	11	578	97	2	—	7	—	—	13	10	—	6	11	—	3	—	10	11	—	—	—	2	—	—	5	3	1
Prairie Warbler	13	—	—	—	—	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Palm Warbler	82	5	4	9	1	2	44	—	5	—	*	8	2	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	*	—	—
Yellowthroat	95	30	4	15	2	15	5	—	4	4	1	—	3	2	—	8	*	2	—	—	—	—	—	—	—	—	—	—	—	—	—
Yellow-br. Chat	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Am. Redstart	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—
House Sparrow	4,092	56	59	205	11	5	46	37	108	63	62	141	41	219	120	107	138	634	360	22	930	196	27	16	3	70	148	42	93	33	100
E. Meadowlark	4,019	318	44	205	10	50	367	8	241	60	21	147	120	428	19	212	212	277	242	66	239	90	42	12	2	27	68	86	33	96	277
Red-wg. Blackbird	184,814	624	220	2,399	365	1,190	2,106	540	653	65	278	3,477	18,918	1,101	21	502	832	859	120	—	27	38	4	—	*	—	3	4	150,455	—	13
Baltimore Oriole	156	—	21	4	—	—	*	—	—	22	—	—	—	3	13	22	3	1	—	—	62	5	—	—	—	—	—	—	—	—	—
Rusty Blackbird	800	—	*	260	100	11	6	30	—	7	—	—	3	51	—	100	—	—	166	—	8	28	10	20	—	—	—	—	—	—	—
Brewer's Blackbird	540	—	—	—	—	—	—	—	—	—	—	40	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	500	—	—
Boat-tailed Grackle	1,855	374	55	369	312	222	523	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Com. Grackle	1,172,425	11	2	60	120	182	683	70	202	15	113	422	3,036	7,854	10	50,008	51	793	28	14	22	1,769	10	3	—	1	60	7	1,103,772	3,103	4
Br.-hd. Cowbird	56,566	—	3	—	—	40	396	6	—	202	3	160	1,310	121	—	52,006	1,262	709	18	33	4	249	—	—	—	—	—	12	17	—	15
Summer Tanager	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Western Tanager	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cardinal	5,028	62	39	96	85	133	377	46	25	104	33	95	79	501	51	266	410	305	368	69	560	250	15	36	27	109	32	377	198	146	134
Rose-br. Grosbeak	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Blue Grosbeak	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—
Painted Bunting	2	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Evening Grosbeak	3,108	57	143	171	87	54	48	—	—	150	113	150	79	459	176	153	178	68	78	17	240	49	6	20	47	222	35	3	96	36	173
Purple Finch	4,697	33	72	952	12	21	42	2	*	188	7	17	45	199	44	241	191	476	403	11	333	290	10	40	12	118	494	42	131	220	51
House Finch	214	—	—	—	—	—	—	—	—	—	—	—	—	3	3	35	1	82	49	—	5	32	—	—	—	4	—	—	—	—	—
Common Redpoll	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3	—	1	2	—

CHRISTMAS BIRD COUNT 1972	Total Individuals	COAST						COASTAL PLAIN						PIEDMONT													MTN.				
		Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 31 December	Wilmington, N.C. 16 December	Litchfield-Pawley's Is., S.C. 20 December	Charleston, S.C. 30 December	Hilton Head Island, S.C. 28 December	Beaufort Co., N.C. 31 December	Pamlico Co., N.C. 21 December	Southern Pines, N.C. 26 December	Dillon, S.C. 26 December	Columbia, S.C. 16 December	Aiken, S.C. 24 December	Roanoke Rapids, N.C. 1 January	Henderson, N.C. 27 December	Raleigh, N.C. 23 December	Chapel Hill, N.C. 31 December	Greensboro, N.C. 30 December	Winston-Salem, N.C. 30 December	Iredell Co., N.C. 1 January	Stanly Co., N.C. 30 December	Charlotte, N.C. 30 December	Greenville, S.C. 30 December	Elkin-Ronda, N.C. 24 December	North Wilkesboro, N.C. 16 December	Caldwell Co., N.C. 29 December	Avery Co., N.C. 28 December	Yancey-McDowell Co., N.C. 16 December	Buncombe Co., N.C. 30 December	Brevard, N.C. 30 December	Great Smoky Mtn. Natl. Park, 31 December
Pine Siskin	424	113	*	4	—	—	6	—	—	36	—	—	—	23	—	72	4	6	15	—	14	9	—	—	—	—	4	12	45	6	55
Am. Goldfinch	2,743	79	55	85	98	125	186	17	9	25	5	87	128	374	11	172	65	174	360	47	92	76	61	103	—	—	22	29	164	45	49
Red Crossbill	151	—	—	—	—	—	—	9	—	27	—	—	—	33	—	15	25	—	—	—	—	—	—	—	—	—	—	16	—	8	18
Ruf.-sided Towhee	1,971	119	13	141	85	215	90	16	27	43	11	97	47	144	31	171	98	77	92	23	121	125	14	14	*	34	4	47	21	37	14
Ipswich Sparrow	14	14	*	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Savannah Sparrow	1,320	268	54	133	14	16	77	—	52	36	—	185	9	303	—	51	85	3	9	—	—	3	—	—	—	—	—	—	—	1	21
Grasshopper Sp.	7	—	—	6	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Le Conte's Sparrow	1	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Henslow's Sparrow	2	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sharp-tailed Sp.	87	46	6	30	4	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Seaside Sparrow	32	8	1	19	3	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Vesper Sparrow	129	—	*	47	—	8	29	—	—	5	*	13	19	—	—	1	—	—	1	—	—	—	—	—	—	—	—	2	4	—	—
Lark Sparrow	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bachman's Sp.	7	—	—	2	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Slate-col. Junco	10,803	41	22	257	341	241	190	32	24	307	33	64	106	2,261	188	772	448	783	563	37	594	353	127	94	48	108	599	1,271	250	536	113
Tree Sparrow	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
Chipping Sparrow	481	14	17	20	17	10	66	29	5	3	1	7	122	75	1	45	10	—	1	1	5	—	—	—	—	4	—	20	6	2	—
Field Sparrow	3,500	16	10	76	62	59	59	28	2	68	29	145	121	604	3	301	93	109	281	4	142	392	35	1	*	23	113	153	380	101	90
White-cr. Sparrow	31	—	—	—	—	—	—	—	—	—	—	—	—	11	—	4	—	3	6	—	—	—	—	1	—	—	—	—	4	2	—
White-th. Sparrow	11,009†	175	27	989	93	248	269	15	72	100	37	420	89	3,481	82	1,341	520	436	456	50	439	272	43	220	19	197	13	379	272	143	112
Fox Sparrow	279	25	6	52	4	35	26	30	3	22	—	2	6	16	1	1	16	4	4	—	1	6	1	—	*	—	3	1	—	14	—
Lincoln's Sparrow	2	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Swamp Sparrow	1,170	302	13	165	37	187	2	8	5	13	2	6	6	133	—	172	41	8	8	—	—	7	—	2	—	—	13	28	7	2	3
Song Sparrow	4,307	266	51	378	29	113	44	11	9	33	19	81	63	559	4	876	177	189	368	9	71	82	1	9	8	22	73	162	365	76	159
Lapland Longspur	5	—	—	—	—	—	—	—	—	—	—	—	—	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total no. species	230	157	138	161	129	147	160	64	63	87	57	64	74	103	54	96	74	87	84	62	79	79	48	53	30	45	53	74	67	63	60
Total no. individuals	2,231,735	48,332	27,560	25,857	7,130	11,387	17,121	2,636	3,471	3,501	1,221	7,009	28,864	43,886	1,811	166,170	7,795	14,794	7,407	1,447	7,996	8,829	967	2,678	310	2,344	3,022	4,741	1,763,884	6,217	3,348
Field observers	545	41	4	22	13	31	47	5	4	6	2	9	11	13	12	21	20	40	26	5	22	27	9	11	3	30	19	10	13	40	29
Yard observers	108	0	1	0	0	0	1	0	1	6	0	0	1	3	2	0	0	2	3	4	44	2	0	3	1	17	0	0	3	11	3
Field parties	180	9	3	12	3	7	13	2	2	3	1	5	5	8	3	8	11	10	9	3	7	8	4	3	1	3	7	3	6	9	12
Party-hours	1,478.5	125	23.5	125	27	56	106	22	21	40	9	29	43	68	24	50	56	97	82	18	47	48	36	24	8	33	52	27	55	42	85
Party-miles	5,583	208	113	508	140	236	222	120	98	209	55	151	196	215	56	194	183	361	355	35	189	191	50	42	28	95	237	237	293	226	340

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*Seen in count area during count period but not on count day.

†Figure below includes some Black-capped Chickadees.

CHRISTMAS BIRD COUNT—1972

ELOISE F. POTTER

230 SPECIES! Yes, CBC birders found 230 species on count days in the Carolinas during the 1972 Christmas Bird Count. This total is eight more than the record of 222 set in 1971.

Wilmington led with 161 species, closely followed by Hilton Head Island (160), Bodie-Pea Island (157), and Charleston (147). Roanoke Rapids set a new piedmont record with 103 species while Raleigh tied its previous high of 96. Yancey-McDowell Counties set a new mountain record with 74 species despite below freezing temperatures throughout the count day.

The total number of individuals recorded is 2,231,735, a surprisingly low figure considering that Charlotte alone listed nearly that many birds in 1971. This year Buncombe County was the only locality reporting a major blackbird roost and thus the only one having more than a million birds.

Among the 30 count areas are five from the mountains, including a new one centered near Brevard in Transylvania County, N.C. Although the total number of observers increased from 507 to 653 and field parties increased from 159 to 180, the party-hours remained about the same and party-miles decreased slightly. Apparently the success of the 1972 Christmas Bird Count can be attributed at least in part to having many small parties afield on foot and lots of competent observers really beating the bushes for the rare and secretive species. Proof of this is the sighting of both Black and Yellow Rails at Bodie-Pea Island and Le Conte's, Henslow's, and Lincoln's Sparrows at Charleston.

Weather conditions during the count period were generally pleasant. The coldest weather occurred on 16 December, which found birders in the Yancey-McDowell area braving 0 to 24 F temperatures and winds up to 75 mph atop Mt. Mitchell. This was the only place that the thermometer stayed below freezing throughout the count day, but at North Wilkesboro the high for the day was only 34 F. Rain, ranging from a morning drizzle at Aiken to all-day precipitation in Beaufort County, N.C., somewhat hampered birders in various count areas on 23, 24, 30, and 31 December.

The present census adds four species to the All-time Christmas Bird Count List for the Carolinas and offers the first count day record of the Long-eared Owl (Charleston, heard only). The list now stands at 276 species with this year's 230 species representing 83% of the total for 1937 through 1972. Additions are the Black Rail (Bodie-Pea Island), American Golden Plover (Bodie-Pea Island), Ringed Turtle Dove (Winston-Salem), and Le Conte's Sparrow (Charleston). The Ringed Turtle Doves, according to C. Royce Hough, are introduced birds that have bred successfully in the wild for at least 3 years. The *A.O.U. Check-list* (1957) recognizes the presence of similar colonies at various sites across the United States.

Three trends appear in a comparison of the present count with those of recent years. 1) Gulls continue to increase as winter residents of the Carolinas. The number of Ring-billed Gulls found this year is more than double last year's total. Inland Roanoke Rapids reported 5,722 while Columbia, Henderson, and Stanly County listed 210, 163, and 145 respectively. 2) Evening Grosbeaks and Purple Finches are visiting the Carolinas this winter in unprecedented numbers, but Pine Siskins are relatively scarce. 3) The House Finch continues to increase as a winter resident in piedmont North Carolina. The only new recording point is Caldwell County (four birds); however, Greensboro reported 82 House Finches, Winston-Salem 49, Raleigh 35, and Charlotte 32. In 1970 eight counts listed a total of 60 House Finches, and just 2 years later the total is 214 from nine areas.

Finally, the 1972 Christmas Bird Count lists a large number of lingering migrants, some of them unusually far inland such as the Common Egret at Brevard, the Tree Swallow at Greenville, S.C., and the American Redstart in Iredell County. Other

CBC CHRISTMAS BIRD COUNT STATISTICS

		1972		1937-1971
Total number species		230		222 (1971)
Total number individuals		2,231,735		7,636,868 (1960)
Number count areas		30		29 (1966)
Total number observers		653		507 (1971)
Field parties		180		159 (1971)
Party-hours		1,478.5		1,465 (1971)
Party-miles		5,583		5,623 (1971)
Highest number species:				
Coast	Wilmington	161	Wilmington	164 (1961)
Coastal Plain	Southern Pines	87	New Bern	95 (1966)
Piedmont	Roanoke Rapids	103	Raleigh	96 (1968)
Mountain	Yancey-McDowell	74	Great Smoky Mt.	71 (1965)
Highest number individuals	Buncombe Co.	1,763,884	Clemson	5,504,288 (1960)

stragglers are Broad-winged Hawks (four localities including inland Chapel Hill), Wilson's Plover (Morehead), Whimbrel (Wilmington), Parula Warbler (Southern Pines), Summer Tanager (Charleston), Rose-breasted Grosbeak (Wilmington), Blue Grosbeak (Charlotte), and Lark Sparrow (Hilton Head Island). Details of these and other particularly interesting sightings appear below in the Compilers' Comments.

COMPILERS' COMMENTS

COAST

BODIE-PEA ISLAND, N.C. (center: 2.7 miles SSE of Bodie Island Lighthouse).

30 December. *White-fronted Goose* and *Ross' Goose* were associated with a flock of 20 Canada Geese near the highway between the North and South Ponds on the Pea Island NWR. Both were adults, and the Ross' Goose had a crippled right foot, indicating it is the same individual that has been present in the area every winter since 1968. This year the bird arrived one week prior to the count date, according to Refuge Manager John Williamson. *Common Teal* (H.P. Langridge et al.) was present for the fourth consecutive year in North Pond on Pea Island NWR. *Yellow Rail* (Dwight E. Peake) was seen at 25 feet as it walked out of dense marsh vegetation on the edge of the pond at Bodie Island Lighthouse. *Black Rail* (J.R. Hoverman, Elizabeth Teulings) was flushed twice from a flooded marsh between the highway and an open pond north of the lighthouse pond. *American Golden Plover* (Paul G. DuMont) was flushed with four Black-bellied Plovers from a grassy sand flat just north of North Pond. The bird had no white in wings or on rump and did not have black axillaries. Both *Pomarine Jaegers* (Henry Armistead; Robert Anderson and Paul G. DuMont) were dark phase, and both were over the ocean off Pea Island as also were the two *Parasitic Jaegers* (Anderson and DuMont; Jay Carter, Edmund LeGrand, Harry LeGrand, William Russell). One Parasitic Jaeger was in light phase, the other dark. *Common Terns* were reported by five parties; identifications were based on black mark extending from the eye around the back of the head. *Whip-poor-will* (Richard Peake Jr.) called three times just before dawn while

observer was calling Screech Owls at Wanchese on Roanoke Island. A *Little Gull* was seen at Bodie Island Lighthouse pond several days prior to the count by David Sonneborn.–PAUL W. SYKES JR., P.O. Box 2077, Delray Beach, Florida 33444.

MOREHEAD CITY, N.C. (center: 0.7 mile NW of Crab Point in lower Newport River).

31 December. *Least Bittern* (Tom Wade) was flushed at close range in a small fresh-water marsh at Fort Macon. Another Least Bittern was found elsewhere in the count circle on 29 December by J.F. Parnell. These are first winter records for area. *Wilson's Plover* (compiler) was on Bird Shoal where it was watched for 20 minutes and compared with Semipalmated and Piping Plovers; first local winter record for November through February. *Long-billed Dowitcher* (compiler) was at Huntley's Impoundment; identified by voice. *Swainson's Thrush* (Charles Lincoln) was well studied. *Painted Bunting* was an adult male that had been present at L.J. Klein's feeder in Beaufort since early December. *Ground Doves* (Wade) appear to be resident at Fort Macon. A *Whip-poor-will* was seen by compiler on Bogue Bank before light the morning of 25 December in response to tape-recorded goatsucker calls. This bird had also been called up in November when it perched on the trunk of a tree woodpecker fashion and flicked its tail revealing white outer rectrices. This is a record count for Morehead City. The habitat has changed significantly since the first census was taken 10 years ago. There is now a fresh-water impoundment, and bird feeders are more numerous than several years ago. Eight species on the present list were found only at feeders.–JOHN O. FUSSELL III, Box 520, Morehead City, N.C.

WILMINGTON, N.C. (center: Myrtle Grove Junction).

16 December. *Bald Eagle* (Jay Carter, Elizabeth and Robert Teulings) was an adult in flight; first local Christmas count record since 1965. *Whimbrel* (John Fussell) was near Masonboro Inlet. *Rose-breasted Grosbeak* (Kitty Kosh, Betty and Lloyd Davis) was at Oakdale Cemetery feeding with Purple Finches in a privet hedge. *Painted Bunting* (Mary Urich) was at a feeder. *Grasshopper Sparrow* (A.G. Massey) was at Echo Dairy Farm. *Henslow's Sparrow* (A.G. Massey) was in overgrown weed field in abandoned farm area; bird was seen well in good light at about 20 feet for almost a full minute.–FRANCES B. NEEDHAM, Box 204, Wrightsville Beach, N.C. 28480.

LITCHFIELD-PAWLEY'S ISLAND, S.C. (center: entrance to North Litchfield Beach at US 17).

20 December. *Least Bittern* (Julian Harrison, Evelyn Dabbs, Jacque Salisbury, Smith Salisbury) was studied carefully.–FREDERICK PROBST, P.O. Box 386, Pawley's Island, S.C. 29585.

CHARLESTON, S.C. (center: 14 miles NE of Mt. Pleasant and 0.5 mile E of US 17).

30 December. *Long-eared Owl* (Perry Nugent) was heard but not seen; call was compared to recordings. The majority of the 578 *Pine Warblers* (Probsts and Wilcoxes) were in two large flocks of about 400 and 100 birds each. The compiler has noticed an unusual number of this species in his own field work this winter. *Summer Tanager* (Robert Wilcox) was an adult male seen in good light with a binocular for about a minute. The bird was in mixed forest, feeding with a variety of other species. There is one previous Christmas count record from Bull's Island by Dick and Sprunt (*South Carolina Bird Life*, 1970, p. 629). *Le Conte's Sparrow* (Perry Nugent) is the first Christmas count record for the Carolinas; however, this secretive species appears to be a fairly common winter resident around Charleston some seasons. *Lincoln's Sparrow* (Perry Nugent) was seen well in good light. Note: The section of the Charleston count area consisting of marshes, tidal flats, and estuaries behind Caper's and Dewee's Islands was not covered in the present count.–JULIAN R. HARRISON, Biology Department, College of Charleston, Charleston, S.C. 29401.

HILTON HEAD ISLAND, S.C. (center: Spanish Wells Landing, Hilton Head Island).

29 December. Unusually warm fall weather is probably the reason we found several lingering summer resident and fall transient species. Some unusual species for our area or

for the season were a light phase *Rough-legged Hawk* (Frank Arnold), *Least Tern* (Orion Hack, Alva Cunningham), *Wood Thrush* (Frank Arnold, Tommy Sasser, Sally Nunally), *Swainson's Thrush* (Dorothy Hitchcock), and *Lark Sparrow* (Helene Parry, Robert and Elizabeth Whitney). The 30 *Purple Sandpipers* (Cunninghams and Rogers) were on an oyster shell bank at north end of Hilton Head Island; rock jetties are within 3 to 4 miles of site. The male *Western Tanager* returned to Jarvis Depkin's feeder 12 December 1972. A bird presumed to be the same individual was present from 28 January to 8 April 1972.–DAVID AND VIRGINIA HARRALL, 15 Plantation Drive, Hilton Head Island, S.C. 29928.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: where Upper Goose Creek enters Pamlico River).
31 December. *Red Crossbills* (Geraldine Cox, Glenn Paul) were seen in flight and while feeding on pine cones; full song was heard several times.–GERALDINE COX, Route 1, Box 151A, Merritt, N.C. 28556.

PAMLICO COUNTY, N.C. (center: in Florence at intersection of 1324 and 1329).
21 December.–MARVIN TURNAGE, Route 1, Box 25, Bayboro, N.C. 28515.

SOUTHERN PINES, N.C. (center: 3 miles NE of Southern Pines at Niagara).
26 December. *Spotted Sandpiper* (Laurence and Roberta Davis) was again at Whispering Pines where it has been found on three of our last four Christmas counts. House Wren (Elizabeth and Robert Teulings) was present for third consecutive Christmas count. *Parula Warbler* (Teulings) was either a female or an immature bird; first winter record for area. *Yellowthroat* (three parties) appears to be becoming of increasingly regular occurrence in early winter in this vicinity. *Red Crossbills* (Teulings) consisted of a flock of 18 feeding in a pine tree plus other individuals identified by call notes.–J.H. CARTER III, P.O. Box 891, Southern Pines, N.C. 28387.

DILLON, S.C. (center: Dillon).
26 December.–JOHN H. WILSON, Box 535, Dillon, S.C. 29536.

COLUMBIA, S.C. (center: 33° 57' N, 80° 59' W).
16 December. All parties counted some Evening Grosbeaks.–GILBERT BRISTOW, 2921 Blossom Street, Columbia, S.C. 29205.

AIKEN, S.C. (center Couchton).
24 December. Scaup (Jeannine Angerman, Tom Rial) is considered uncommon because count area has no large lakes or rivers.–GERALD E. KNIGHTON, 304 Kirby Drive, North Augusta, S.C. 29841.

PIEDMONT

ROANOKE RAPIDS, N.C. (center: 1.4 miles SE of Weldon).
1 January. *Black-crowned Night Heron* (Betty and Lloyd Davis, Joyce Bennett) was an immature flushed twice at Stevenson's Goose Pond near Garysburg; first winter record for area. Most of the *Canada Geese* were at Stevenson's Goose Pond where they are protected. One *Red-cockaded Woodpecker* (compiler, Davises) was heard calling at the site of a colony discovered just 4 weeks prior to count. *Fish Crows* (three parties) were in Occoneechee Neck area; first winter records for Roanoke Rapids. *Catbird* (Jack Potter) is also first local winter record. *Black-and-white Warbler* (Lloyd Davis) was well studied. *House Finches* have been at Louise Hutchinson's feeder for weeks. *Red Crossbills* (two parties) were at Occoneechee Neck. Edmund LeGrand found the *Lapland Longspurs* with a flock of about 600 Horned Larks in same section of Occoneechee Neck where Lynch found them last winter. [See General Field Notes this issue for details of previous longspur sightings near Roanoke Rapids.–EFP]–J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

HENDERSON, N.C. (center: Henderson).

27 December. *House Finches* are present for fourth consecutive winter.—A.W. BACHMAN, 111 Jeanette Avenue, Henderson, N.C.

RALEIGH, N.C. (center: Norfolk Southern RR and Lake Wheeler Road crossing).

23 December. *American Bittern* (Mary Smith) was at Greenview Farm on 1 January. Two adult *Whistling Swans* (Bruce Bolick) were at Lake Benson 29 December. *Greater Scaup* (compiler) was a male at Lake Wheeler. Male *Oldsquaw* (Bruce Bolick) was on Lake Wheeler 17 December. *Catbirds* (Edmund LeGrand) were seen 20 December and on count day; species was formerly more numerous in winter than in past few years. *Blue-gray Gnatcatcher* (E. LeGrand) was in a thicket at Lake Raleigh. *Black-and-white Warbler* (compiler) was a female. *House Finches* were counted at a roost at the Raleigh Rose Garden where up to 40 had been seen earlier in December. *Red Crossbills* (Elizabeth and Robert Teulings) were at Umstead Park.—HARRY E. LeGRAND, 331 Yadkin Drive, Raleigh, N.C. 27609.

CHAPEL HILL, N.C. (center: intersection of Columbia and Franklin Streets).

31 December. Charles H. Blake sighted the immature *Broad-winged Hawk. Common Gallinule* (compiler, David Barnes) was found in exactly the same place as on the 1970 count. Total of 1,262 *Brown-headed Cowbirds* is more than 12 times our highest in 11 previous counts.—JAMES O. PULLMAN, Route 6, Box 149, Chapel Hill, N.C. 27514.

GREENSBORO, N.C. (center: transmitter of Radio Station WBIG).

30 December. The 82 *House Finches* are the largest number recorded to date at one locality in North Carolina.—DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N.C. 27408.

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Parkway).

30 December. *Ringed Turtle Doves* (Ramona Snavely), descendants of penned birds, have been feral for 6 years and have bred successfully in the wild for at least 3 years. *Lincoln's Sparrow* (compiler, Fred Hill) was studied and compared to Song, Swamp, and Savannah Sparrows.—C. ROYCE HOUGH, 713 Lankashire Road, Winston-Salem, N.C. 27106.

NORTH IREDELL COUNTY, N.C. (center: South Yadkin River bridge on Chipley Ford Road).

1 January. Yellow wing and tail patches were plainly seen on the *American Redstart* (compiler).—JANE MULLEN, 408 Salisbury Road, Statesville, N.C. 28677.

STANLY COUNTY, N.C. (center: 2 miles NW of Badin).

30 December. *Black-and-white Warbler* (Anne Hatley) was seen well. *House Finches* are present for third consecutive winter.—VIVIAN WHITLOCK, Box 219, Albemarle, N. C. 28001.

GREENSBORO, N.C. (center: intersection of South Boulevard and Woodlawn Road).

30 December. *Common Snipe* count was unusually high for this area. *Bonaparte's Gull* (Dale Arvey et al.) was a first for a local count. Number of *Red-breasted Nuthatches* was surprisingly high. The most unexpected find was a female *Blue Grosbeak* (David Wright), possibly a bird of the year, found in a thicket bordered by an open field on one side and a gravel road on the other. *House Finches* (Elizabeth B. Clarkson, compilers) were in two flocks at widely separated feeders; present for fourth consecutive winter.—JOE AND BECKY NORWOOD, 1329 Goodwin Avenue, Charlotte, N.C. 28205.

GREENVILLE, S.C. (center: Hwy 291 and 29).

30 December. *Tree Swallow* was unusually late for our area. Although we had only six Evening Grosbeaks on the count day, flocks of up to 25 birds have visited feeders since that date.—ROSA LEE H. HARDIN, Cleveland, S.C. 29635.

ELKIN-RONDA, N.C. (center: 3 miles N of Elkin on US 21).

24 December. *White-fronted Goose* (compiler, Jerry Tysinger, Fred Masten Jr.) was a

mature bird carefully studied with a flock of 300+ Canada Geese resting beside a pond in protected feeding area.–LIN HENDREN, Box 148, Elkin, N.C. 28621.

NORTH WILKESBORO, N.C. (center: North Wilkesboro).
16 December. *Horned Grebe* was seen by Linville Hendren, C. Garvin Hughes, and compiler.–WENDELL P. SMITH, 911 E Street, North Wilkesboro, N.C. 28659.

CALDWELL COUNTY, N.C. (center: Lenoir).
29 December. This appears to be the westernmost record of the *House Finch* in North Carolina to date.–HELEN MYERS, 310 Beall Street, Lenoir, N.C. 28645.

MOUNTAINS

AVERY COUNTY, N.C. (center: entrance to Grandfather Mountain toll road).
28 December. In 1971 this count area was reported in *American Birds* but not in *Chat. Common Redpolls* (Walter Hall), all males, were feeding in a weedy field with Purple Finches and American Goldfinches. Observer had seen the species earlier in the week in northern Ohio.–MARGERY PLYMIRE, RD 2, Chestertown, Maryland 21620.

YANCEY-McDOWELL COUNTIES, N.C. (center: 2.3 miles S of Buck Creek Gap on NC 80).
16 December. The immature *Whistling Swan* (Joyce E. Hall, Mark Hall, Walter Hall, Daniel McKay) was seen well at close range on Morgan Lake. It was no longer present several hours later. *Shovelers* and a male *Blue-winged Teal* were found by same field party.–JOSEPH L. HALL, Route 8, Box 1136, Asheville, N.C. 28806.

BUNCOMBE COUNTY, N.C. (center: intersection US 70 and SR 2740, Swannanoa, N.C.).
30 December. *Catbirds* (Halls) were in Fairview area. Majority of the Starlings, blackbirds, and grackles were in a large roost on the south side of the Swannanoa River at the intersection of US 74 and NC 81 (Halls). *Common Redpoll* (Mary Frances Sawyer) was in the western end of Beaverdam Valley. Three *White-crowned Sparrows* (Sawyer) were in western Beaverdam Valley, and one in Fairview area (Halls).–ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

BREVARD, N.C. (center: 7.5 miles SE of Brevard at junction of US 276 and Transylvania County SR 1536 at Cedar Mountain).
30 December. This new count area is centered near the Eastern Continental Divide and has an altitude range of about 950 to 3,800 feet. Heavy fog restricted visibility at higher elevations. Sightings of the following unexpected species may be attributed to the lack of sustained periods of truly cold weather in the fall of 1972: *Common Egret* (Joyce and Joseph Schatz), *Brown Thrasher* (Louise Davidson and others), *Savannah Sparrow* (Harold Zimmerman).–WALTER C. HOLLAND JR., 290 Maple Street, Brevard, N.C. 28712.

GREAT SMOKY MOUNTAINS NATIONAL PARK, N.C.-Tenn. (center: Bull Head of Mt. Le Conte).
31 December.–DONALD H. DeFOE, Great Smoky Mountains National Park, Gatlinburg, Tennessee 37738.

OBSERVERS

BODIE-PEA ISLAND, N.C.: Robert Ake, Robert Anderson, Henry Armistead, Mike Browne, Jay Carter, Paul G. DuMont, Philip A. Dumont, Wavell Fogleman, John Fussell, Clay Gifford, Sam Gifford, Gilbert Grant, Robert J. Hader, J. Russel Hoverman, David Hughes, Howard P. Langridge, Karla Lawler, Palmer Lawler, Edmund LeGrand, Harry E. LeGrand, Merrill Lynch, Holly Overton, Dwight E.

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General Field Notes

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A Nest of the Swallow-tailed Kite at Wambaw Creek, Charleston County, S.C.

JOHN EMMETT CELY
5140 Furman Avenue, Columbia, S.C. 29206

A nest of the Swallow-tailed Kite (*Elanoides forficatus*) was discovered 8 April 1972, in an 80-foot loblolly pine (*Pinus taeda*), only 15 feet from the dirt road that leads from Elmwood campground to the Wambaw Creek bridge on Echaw Road. This locality is situated in the Francis Marion National Forest approximately 8 air miles NNE McClellanville, Charleston County, S.C. The nest tree was adjacent to a small field and about 50 yards from the edge of Wambaw Creek swamp.

The nest was near the top of the tree and in an early construction stage when first discovered. The birds could be seen carrying twigs, and later Spanish moss, in their feet and bills. More than two birds were building this nest, as one could be seen on the nest, while two more were bringing nest material. I often observed four kites together flying over Wambaw Creek.

Subsequent nest trips from Columbia were made on the weekends of 15 April, 22 April, 29 April, 13 May, 3 June, and 10 June. On 29 April I showed the nest to Wadell Robey of Charleston, who photographed it with an adult on the nest. No young birds were ever seen in this nest, and whether it was successful or not is uncertain. The last two trips showed no signs of the parent birds and the nest was apparently empty.

A talk with conservation officer Fred Best at Elmwood campground revealed that he had seen kites in other parts of the National Forest carrying twigs for nests. It should be brought to the attention of CBC members that the Swallow-tailed Kite is a common but local summer resident in this area, and the Francis Marion National Forest may be the northern-most limit of the breeding range of this magnificent species. As such it occupies a unique and important role in the National Forest system. A careful eye should be kept on this Forest to protect Swallow-tailed Kite habitat from destruction by such practices as clear-cutting and road-paving that lead to excessive human interference.

Second Bridled Tern Specimen from North Carolina

GILBERT S. GRANT
Route 1, Box 563, Sneads Ferry, N.C. 28460
10 September 1972

On 8 January 1972 I found a badly decomposed Bridled Tern (*Sterna anaethetus recognita*) on the shoulder of Hwy 12 at Oregon Inlet, just south of Nag's Head, N.C. The skull, wings, feet, and tail feathers were all that remained of the bird. I judged the bird to have been dead for at least 2 months. It could possibly have been blown ashore by Hurricane Ginger during the first week of October 1971, as was the immature Bridled Tern (first state specimen) found at Oregon Inlet by David Hughes and Gary Williamson on 3 October 1971 (*American Birds*, 26:48, 1972). Roxie C. Laybourne kindly identified the remains of the Bridled Tern now deposited in the National Museum of Natural History (USNM #565914).

Traill's Flycatchers Nesting at Raleigh, N.C.

EDMUND K. LeGRAND
HARRY E. LeGRAND JR.
331 Yadkin Drive, Raleigh, N.C. 27609

12 August 1972

During the summer of 1971 we found a small population of Traill's Flycatchers (*Empidonax traillii*) near Lake Raleigh in Wake County, N.C. (*Chat*, 35:113). However, no evidence of nesting was found. Traill's Flycatchers returned to the same area in 1972, and a careful and intensive study of these birds by several Raleigh birders resulted in the discovery of one and possibly two nests.

In 1972 the first Traill's Flycatcher at Lake Raleigh was seen and heard singing on 20 May, but a silent *Empidonax* flycatcher on 15 May in a nearby thicket was probably a Traill's. Chris Marsh visited this area on 29 May and observed at least three singing males and a female. On 11 June he and Bill Brown found a nest of this species in an elderberry (*Sambucus canadensis*) about 6½ feet from the ground. Four eggs were in the nest, which was made primarily of fine grasses. The general habitat around the nest site was a low, open bushy thicket with a small cattail marsh nearby.

On 18 June Edmund LeGrand found a mass of nest material about 10 feet up in a red mulberry (*Morus rubra*) on the edge of the thicket about 50 yards from the first nest. He suspected this was the beginnings of a nest because a pair of adult Traill's Flycatchers were nervously flitting around the bush. The same day Harry LeGrand visited the first nest and found that pair of adults and their four eggs.

Harry LeGrand visited the area on 30 June and observed both pairs of adults. At least two nearly-fledged young were present in the first nest. The second nest could not be located and may have been washed away by heavy rains. Both authors visited the thicket on 8 and 9 July, but we were unable to find the second nest again or the birds associated with it. On these dates the first nest was empty but intact. Although no young birds were seen out of the nest, it is believed that at least one fledged because the adults seemed disturbed when we approached the nest and refused to leave the immediate area.

Raleigh is the second locality in North Carolina where Traill's Flycatchers have been found nesting, the other location being North Wilkesboro (*Chat*, 29:88). Thus the breeding range of this species ("fitz-bew" form) has been extended about 100 miles to the southeast.

Olive-sided Flycatcher at Montreat, N.C.

JANE P. HOLT
Department of Biology
Presbyterian College, Clinton, S.C. 29325

28 September 1972

An Olive-sided Flycatcher (*Nuttallornis borealis*) was observed 19 August 1972 in Montreat, N.C., at an altitude of 2,900 feet. This is the first published record of this species in Buncombe County since John S. Cairns included it in his paper, "The Summer Birds of Buncombe County, North Carolina" in *Orn. and Ool.* February 1889. In this paper he noted "but a few specimens; one on Craggy Mountain and one shot half way up the Black Mountain." (Cairns' observations were later included in a list of Birds of Buncombe County by Brimley in 1940.) The altitudes of both of Cairns' locations exceed 3,500 feet with portions of the Craggy range exceeding 5,000 feet. The altitude of this Montreat bird at 2,900 feet was significantly lower. The only other August observation of this bird was recorded by Wendell Smith at North Wilkesboro 17 August 1968 (*Chat*, 33:28).

The Olive-sided Flycatcher observed in Montreat was perched in the top of a dead oak tree on a mountainside. It remained for 20 minutes during which time it made two forays for food returning to the same branch each time, but facing in opposite directions so that all sides could be clearly observed through binoculars. While it preened, the fluffy white feathers above the flanks were exposed as large white patches on both sides above the wing secondaries. The olive sides, separated by a white line continuous with the white throat, were clearly visible. Photographs taken through a 600mm lens were submitted for verification.

[Dept. Ed.—This editor concurs with the author on the identity of this bird from the photograph submitted, which, however, is not suitable for printing.]

Sprague's Pipit at Raleigh, N.C.

ROSS SILCOCK
216 Park Ave., Raleigh, N.C. 27605
CHRIS MARSH, ROBERT SMALL, and ROBERT DOWNS
15 September 1972

To the best of our knowledge, there is only one published record of Sprague's Pipit (*Anthus spragueii*) for North Carolina. This was a sight record by George A. Smith at Chapel Hill, 9 May 1959 (*Chat*, 23:89). We report here a second North Carolina sight record on 18 March 1972 at Greenview Dairy Farm in Wake County, about 8 miles S of Raleigh.

The bird was alone, although several Savannah Sparrows (*Passerculus sandwichensis*) and Water Pipits (*A. spinoletta*) are commonly seen in winter in the area where it was found. It is noteworthy that the birds observed by Norris in South Carolina (*Chat*, 21:25) were also found in habitat occupied by Savannah Sparrows. The Greenview site consists of a dairy pasture adjoining a shallow marsh at the head of a man-made pond about 10 acres in extent. The pasture was rather damp near the marsh in early spring, and it was in this area that the bird was first noticed. It appeared rather larger than a Savannah Sparrow, and the walking gait along with the thin bill indicated to us that the bird was unusual. These factors together with the white outermost tail feathers, the lightness in color of the bill at the base, the yellowish-orange legs, and the streaked plumage (most noticeable on the back) without any buffy or greenish-gray wash led us to the conclusion that the bird was a Sprague's Pipit, rather than the more common Water Pipit. Field marks were checked at leisure from Peterson's *A Field Guide to the Birds* and *Birds of North America* by Robbins et al. Binoculars and a Balscope Sr. telescope were used at a distance of about 30 yards. The day was clear with perfect light conditions for studying the bird. During the 20-minute period of observation, the bird did not appear afraid. Finally we flushed it, whereupon it gave a call similar to, but lower pitched and slower than, that of the Water Pipit. It flew out of sight in a northerly direction and was not seen again despite a search later the same day.

Mountain Fall Record of Wilson's Warbler at Montreat, N.C.

JANE P. HOLT
Department of Biology
Presbyterian College, Clinton, S.C.29325
5 October 1972

A Wilson's Warbler (*Wilsonia pusilla*) was observed 29 August 1972 at an altitude of 3,000 feet in Montreat, N.C. The bird was a male in full breeding plumage with a distinct nearly rectangular black cap behind a yellow forehead. Observation was made at a distance of 15 feet as the bird appeared in a dogwood near a window-ledge bird feeder. A cold front had resulted in a low temperature of 55 F the night before this bird was seen.

This bird appears to be a rare fall migrant in the mountains of western North Carolina. No other fall records of the Wilson's Warbler in this area have been published since the 22-25 September 1894 record in Brimley's 1940 list of "The Birds of Buncombe County" (*Chat*, 4:21-36). This warbler was also recorded by Bob Ruiz in Swannanoa, N.C., 25 September 1969 in an unpublished observation. Arthur Stupka, in *Notes on the Birds of Great Smoky Mountains National Park* (1963), lists only four fall records – 31 August 1941, 11 September 1944, 18 September 1934, and 2 October 1939. Three of these records were at the Park Headquarters in Tennessee and one at Deep Creek.

In view of these isolated records, further field studies are needed to determine the status of this bird in the mountain region of the Carolinas.

Clutch of Unusually Large Eggs Laid by Rufous-sided Towhee

ELOISE F. POTTER
P.O. Box 277, Zebulon, N.C. 27597
2 July 1972

On 15 June 1971 I discovered a banded female Rufous-sided Towhee (*Pipilo erythrophthalmus*) incubating a clutch of three unusually large eggs in a ground-level nest concealed beneath a bush beside the driveway to my home near Zebulon, Wake County, N.C. The eggs were of normal color for the species, and two were normal in shape though larger than average. The largest egg was somewhat constricted near the middle much like a peanut shell with two seeds, one slightly larger than the other. At its greatest dimensions this egg measured 35.0 x 16.0 mm. The other two eggs were 27.5 x 18.0 mm and 24.5 x 18.0 mm. Two extremely large *P. p. erythrophthalmus* eggs described in Bent's *Life Histories* (1968) measured 25.7 x 18.3 mm and 24.4 x 19.3 mm. Measurements of 50 eggs averaged 23.1 x 17.0 mm.

On 21 June the smallest egg in the clutch had hatched, and the nest contained one chick and two eggs through 25 June. The morning of 26 June I found the eggs punctured and both eggs and chick being devoured by tiny red ants that completely covered the contents of the nest.

A few days later I saw the banded female carrying nesting material toward a site about 150 feet from the first nest, but I did not locate the second nest until 3 August when it contained three well feathered chicks, which left the nest the next day.

A Le Conte's Sparrow Record for Moore County, N.C.

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1 September 1972

On 30 April 1972, while conducting the annual Southern Pines Spring Bird Count, Sandra Bishop, Dana Taylor, and the authors observed a Le Conte's Sparrow (*Passerherbulus caudacutus*). The bird was located in a large complex of interconnecting pastures at Little River Farm, near Whispering Pines in Moore County, N.C. Two creeks run through the pastures, and, except in times of drought, water stands in a number of places. In the drier areas upland grasses, especially broomsedge (*Andropogon* sp.), are prevalent, and in the wetter portions a variety of sedges and rushes are dominant.

We had flushed several Savannah Sparrows (*Passerculus sandwichensis*) and were searching for rails in the marshy places when we flushed a sparrow that was immediately separable from the Savannahs by its "sharp" tail and very pale, streaked back. The bird flew a short distance and landed. It was subsequently flushed at close range at least a dozen times. Making it fly was very difficult, and it would generally flush several feet or yards from where it was seen to land. It would neither perch nor respond to "squeaking." Carter saw it once very briefly on the ground, but all other observations were in flight, usually at distances of between 10 and 30 feet. It showed a definite preference for the wet sedges and rarely left them.

The bird was approximately the size of a Savannah Sparrow. It had a sharp-pointed tail, an orangish eye-line, and a very pale, well-streaked back. Both authors noted a light crown stripe, and Bishop observed streaking on its cream-colored sides.

After careful consideration and repeated reference to field guides, the authors determined the bird to be a Le Conte's Sparrow. All observed field marks, the bird's actions, and the habitat confirm the identification. There are four previously published records for this species in North Carolina. C.S. Brimley collected one at Raleigh on 21 April 1894 (*Birds of North Carolina*, 1959, p. 376). Single birds were observed on 23 October 1963 in Wake County (*Chat*, 30:30), on 17 October 1968 at Franklin (*Chat*, 34:49-50), and on 29 November 1970 at Morehead City (*Chat*, 35:59). There are several records for South Carolina, and *South Carolina Bird Life* (1970) considers it a "rare and erratic winter resident between October 25 and April 27." The 1957 edition of the *A.O.U. Checklist* gives much of the southeastern United States as the normal winter range, but terms Le Conte's Sparrow as "casual" in North Carolina.

On 9 October 1971 Carter had observed a very similar bird at the same locality. The bird showed the same preference for wet sedges, and was exceedingly hard to flush. It was seen only in flight. It appeared darker on the back than did the Le Conte's Sparrow, and had a sharp tail and an orangish eye-line. Due to the extreme rarity of Le Conte's Sparrow in North Carolina, and the dark-streaked back, Carter concluded that the bird was a Sharp-tailed Sparrow (*Ammospiza caudacuta*). At the time of this observation, Sharp-tailed Sparrows were being found far inland in tower kills at the WECT tower near White Lake, Bladen County, N.C. (unpub., Carter and Parnell). Carter now feels it is best to retract the record for the Sharp-tailed Sparrow since a reasonable doubt about its accuracy has arisen due to the recent record of the very similar Le Conte's Sparrow at the same locality. The Sharp-tailed Sparrow record appeared in the *Chat* (35:105) and in *American Birds* (26:49).

Notes on Wintering Lapland Longspurs in Northampton County, N.C.

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21 June 1972

About 15 Lapland Longspurs (*Calcarius lapponicus*) were present at Occoneechee Neck, Northampton County, N.C., 12 through 27 February 1972. These birds were associated with a large flock of 250 to 310 Horned Larks (*Eremophila alpestris*) during their 16-day residence here and were seen by five observers. The purpose of this note is to acquaint the reader with plumage characteristics of the longspurs and with the behavior of the lark-longspur flock.

Occoneechee Neck is an area of low, flat, and extensive farmland interspersed with tracts of bottomland and swampy hardwoods located in the western coastal plain. It is situated on a wide bend or "neck" of the Roanoke River about 12 miles SE of Roanoke Rapids, N.C. Elevation varies from 40 to 65 feet above sea level.

On 12 February the Lapland Longspurs were feeding with about 310 Horned Larks in a 275-acre plowed field almost totally devoid of vegetation. Bill Collier and I carefully studied two male longspurs in the flock. Both appeared to be in the process of obtaining breeding plumage, possessing a conspicuous rufous-reddish nape contrasting against their brownish streaked crown and back. This was the most outstanding feature of their otherwise drab plumage. The underparts were whitish except for a black patch extending across the breast and dark side streakings. Females were much more inconspicuous with no distinctive markings. About the size of a House Sparrow (*Passer domesticus*), they appeared much like brownish, finely streaked sparrows. Differentiation between the longspurs and larks was fairly easy; while on the ground the dark streakings on the back and the short, sparrow-like bill separated the longspurs. In flight, longspurs were more undulating and their short, slightly notched dark tails were apparent. Although longspurs are slightly smaller than larks, I found this to be an unreliable field mark.

Longspurs were most easily identified by their distinctive flight call: a low, staccato, rattling "ticky-ticky-tic," easily separable from the high, sibilant squeaks of horned larks. This note was heard frequently in flight and was seemingly the only vocalization.

Behavioral aspects were studied in detail with the more interesting ones discussed here. While feeding on the ground, the longspurs freely mixed with the larks, never remaining segregated from them. Both species flew together in tight, compact flocks but quickly spread out after landing in a field. Observation was sometimes difficult because of their habit of feeding in the bottom of furrows where they remained hidden for long periods. Their brownish backs blended in quite closely with the soil, providing excellent protective coloration. Being inhabitants by nature of large, bare, and open areas without cover, this species must depend on its coloration for survival. Each time a soaring hawk passed over the flock, both longspurs and larks immediately squatted low against the ground, compressing their bodies and remaining still until the threat passed. In this position they became virtually invisible. This curious behavior is a clear example of survival adaptations of open-country birds. Chapman (*Handbook of Birds of Eastern North America*, 1939) quotes Seton on similar longspur behavior:

> "When in the hills they have a curious habit of squatting just behind some clod, and, as their colors are nearly matched to the soil, they are not easily observed, nor will they move until you are within a few feet; they then run a few feet and squat again."

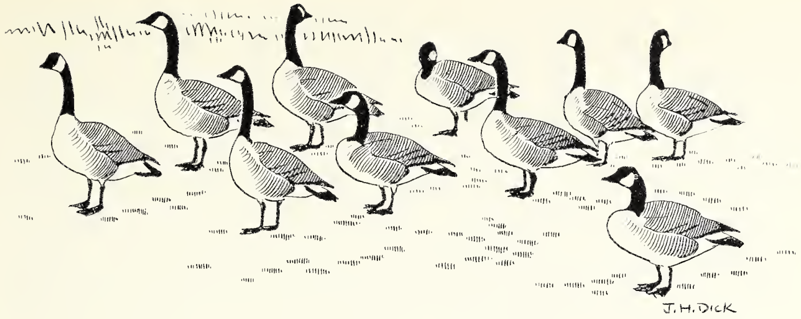
While feeding, both species were quite active, maintaining a fairly fast gait. Almost all individuals in a flock moved in the *same* direction on the ground, apparently in this manner gleaning the surface of food most efficiently. On one occasion I walked parallel to a progressing flock for a distance of about 100 feet. One flock never remained in any one spot more than 10 to 15 minutes.

Cold weather and high winds did not visibly affect the birds' feeding activities (wind chill factor to −5) although these conditions could adversely affect human observation.

During their 16-day stay here, the longspurs were seen by Harry and Edmund LeGrand on 19 February and by Mike Browne on 22 February. Repeated observations revealed at least six male birds plus eight or nine female and immature male longspurs present with the larks. These individuals ranged within .7 mile of where they were first discovered, a fairly small area considering the hundreds of acres of similar habitat in the vicinity.

Environmental factors (such as a major food shortage) are not believed to be a factor in the longspurs' appearance this far south because their occurrence in North Carolina in the winter of 1971-1972 was not widespread. It is possible that the species may be a regular, but rare, winter visitor in the state, having been largely overlooked in previous years. It should be looked for, especially in large Horned Lark flocks in the northern sections of the state in winter.

Pearson, Brimley, and Brimley (*Birds of North Carolina*, 1959) cite only six occasions in which this species has been recorded in the state, most of these in the early 1900s in coastal or mountainous localities, the latest in 1946. There is also a recent record of one on the Bodie-Pea Island Christmas Bird Count (*Chat*, 36:22). It appears the Occoneechee Neck sightings represent the largest number ever found at one time in the state and also the first interior coastal plain record.



BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates 1972)

COMMON LOON: Two migrants were noted at Lake Hartwell near Clemson, S.C., on 29 October by Sidney Gauthreaux. At other inland locations, single birds were seen at Lake Wheeler near Raleigh on 22 October and 2 December by Robert Hader, and eight were found at Roanoke Rapids Lake, Halifax County, N.C., on 27 November by Merrill Lynch.

HORNED GREBE: Inland near Winston-Salem, N.C., Charles Frost found 12 at Belews Creek Lake on 16 November and a flock of 104 at Salem Lake the following day.

CORY'S SHEARWATER: Two were seen at Cape Lookout, N.C., on 18 August by Richard Rowlett.

SOOTY SHEARWATER: Three were sighted by J.B. Kelley during an offshore cruise 15 miles SE of Charleston, S.C., on 10 November.

WILSON'S PETREL: One was seen at Hatteras Inlet on the North Carolina Outer Banks on 22 August by Richard Rowlett. Six were seen off Charleston, S.C., on 10 November by J.B. Kelley.

WHITE-TAILED TROPICBIRD: An adult circled within close range of the "Captain Stacey" cruising 70 miles off Morehead City, N.C., on 28 August, Claudia Wilds.

GANNET: An early fall sighting was recorded at Carolina Beach, N.C., where an immature was seen on 28 September by Edmund LeGrand and Sebastian Patti.

DOUBLE-CRESTED CORMORANT: One made an uncommon appearance inland at Lake Wheeler near Raleigh, N.C., on 21 November, Ross Silcock.

ANHINGA: On 10 October, Joshua Lee observed an adult bird on Sunset Lake, about 3 miles N of Fuquay-Varina, Wake County, N.C., an unusual inland record.

COMMON EGRET: An individual was present at Salem Lake near Winston-Salem, N.C., on 3 November, Charles Frost.

SNOWY EGRET: Three were noted in the western piedmont near North Wilkesboro, N.C., on 31 August by Wendell Smith.

LOUISIANA HERON: One was an uncommon inland visitor at Lake Murray, Richland County, S.C., on 15 August, Robert Overing. Another inland wanderer was seen at Lake Raleigh in Wake County, N.C., on 19 September by Ross Silcock.

WOOD IBIS: One was seen at Twin Lakes, Sunset Beach, N.C., on 23 September by Jay Carter, Evelyn Dabbs, and Elizabeth Teulings.

WHITE IBIS: An immature bird was an uncommon visitor on the North Carolina Outer Banks at Pea Island 27 to 29 August, Merrill Lynch.

AMERICAN FLAMINGO: An accidental visitor was discovered in Pamlico Sound at Pea Island NWR on 4 November by Edmund LeGrand, Harry LeGrand, and Sebastian Patti. The bird remained on the refuge about three weeks, last reported on 24 November by James Pullman.

WHISTLING SWAN: Two birds at Roanoke Rapids Lake near Roanoke Rapids, N.C., on 20 October (Merrill Lynch) and three at Kerr Scott Reservoir in Wilkes County, N.C., on 30 November (Mary Blanz, fide Wendell Smith) were uncommon inland visitors.

SNOW GOOSE: An adult present for 2 weeks at Johnston's Farm in the Occoneechee Neck section of Northampton County, N.C., was an unusual fall visitor in that locality. The bird was first seen on 29 October and remained there through 12 November, Merrill Lynch.

COMMON SHELDUCK: Two drakes were at Pea Island NWR during the last week in November, reported by Tim Wilkins and several other observers. An earlier occurrence of possibly the same pair was noted there in early July by Wayne Irvin.

GREEN-WINGED TEAL: One made an unusually early fall appearance at Raleigh, N.C., on 19 August, Chris Marsh and Ross Silcock.

REDHEAD: Two were uncommon visitors at Lake Wheeler near Raleigh, N.C., on 28 October and six others were found there on 2 December, Robert Hader.

GREATER SCAUP: Two were at Salem Lake near Winston-Salem, N.C., on 17 November, an uncommon local occurrence, Charles Frost.

OLDSQUAW: Two were noted as inland visitors at Lake Wheeler, near Raleigh, N.C., on 30 October by Bruce Bolick. A flock of 12 was found at Roanoke Rapids Lake near Roanoke Rapids, N.C., on 12 November by Merrill Lynch.

SURF SCOTER: A rare inland occurrence was recorded at Roanoke Rapids Lake in Halifax County, N.C., where two were seen on 30 October by Merrill Lynch. One was also found at Lake Wheeler near Raleigh, N.C., on 13 November by Bruce Bolick and John Wright.

COMMON MERGANSER: Two were seen at Lake Wheeler near Raleigh, N.C., on 17 November by John Wright and Bruce Bolick.

ROUGH-LEGGED HAWK: One was observed at Belews Creek Lake north of Winston-Salem, N.C., on 12 October and again on 16 November by Ramona Snavely, Ruth Hill, Robert Witherington and Charles Frost.

BALD EAGLE: Fall sightings were reported of single adults at Orton Plantation near Wilmington, N.C., on 9 October (Paul DuMont) and at Topsail Beach, N.C., 4 November (Gail Whitehurst). Four adults were seen on South Island near Charleston, S.C., 22 October by Ted Beckett. Two adults and an immature were seen in Francis Marion National Forest, S.C., 18 November by T. Dodd, fide Dennis Forsythe. In addition, an adult was seen 29 November and an immature 1 December at Brookgreen Gardens near Litchfield Beach, S.C., by Gordon Tarbox and F.M. Probst.

PEREGRINE FALCON: Two fall sightings were reported from the North Carolina Outer Banks where single birds were seen at Pea Island on 2 October by James Pullman and on 7 October by Mike Godfrey. Elsewhere, individuals were recorded at Fort Fisher, N.C., on 9 October by Paul DuMont and at Brookgreen Gardens, S.C., on 13 November by F.M. Probst and party. One was also seen at Magnolia Gardens near Charleston on 27 November by Ted Beckett.

SANDHILL CRANE: One was seen at Sullivan's Island near Charleston, S.C., on 19 September by Z.T. Ralston, as reported by Dennis Forsythe.

PURPLE GALLINULE: Three were a noteworthy find at Orton Plantation near Wilmington, N.C., 24 September, Edmund LeGrand et al.

AMERICAN COOT: Gilbert Grant reported an unusually large concentration of at least 10,000 at the West Onslow Beach, N.C., impoundment on 23 November.

AMERICAN OYSTERCATCHER: Two were unexpected visitors at Par Pond on the AEC Savannah River Reservation near Aiken, S.C., on 30 November, Tom Murphy, fide Gerald Knighton.

SEMIPALMATED PLOVER: During field work along the North Carolina Outer Banks in late August, Richard Rowlett found the species extremely abundant. Estimated numbers were 3,500 at Ocracoke Island on 20 August, 15,000 at Pea Island on 21 August, and 7,500 at Portsmouth Island on 22 August.

AM. GOLDEN PLOVER: Five records were reported by various observers from the Bodie-Pea Island, N.C., area from mid-August through early October, all of single birds. Two were also seen on 9 October at Fort Fisher, N.C., by Paul DuMont.

LONG-BILLED CURLEW: Two were found on tidal flats at Portsmouth Island, N.C., on 3 August by Richard Rowlett; another was seen at Oregon Inlet on 30 September by James Pullman.

PURPLE SANDPIPER: One was seen at Wrightsville Beach, N.C., as early as 25 October by Jay Carter.

WHITE-RUMPED SANDPIPER: Paul DuMont and Harvey Mudd recorded 11 in the Bodie-Pea Island, N.C., area on 20 August, and Merrill Lynch found seven at the Bodie Island lighthouse pond 28 August. A late migrant was noted inland at Occoneechee Neck in Northampton County, N.C., on 18 November by Merrill Lynch.

BAIRD'S SANDPIPER: A flock of at least 18 was found at the north pond of the Pea Island NWR on 1 August by Richard Rowlett. There were subsequent reports of a single bird seen there on 30 September by Gard Otis and Sebastian Patti and another at Oregon Inlet on 1 October by Paul DuMont, Robert Ake, et al.

DUNLIN: An inland occurrence of an individual was noted on 29 October at Occoneechee Neck in Northampton County, N.C., where the species has not heretofore been recorded, Merrill Lynch. A few were also recorded as inland migrants in the Raleigh, N.C., area during the last half of October, Harry LeGrand, Edmund LeGrand, Robert Hader and Ross Silcock.

LONG-BILLED DOWITCHER: Various observers reported finding migrants in small numbers among the commonly seen Short-billed Dowitchers along the North Carolina Outer Banks from August through the fall season. Typical counts ranged from 2 to 20, but as many as 40 were identified by Paul DuMont et al. in the Bodie-Pea Island area on 7 October.

WESTERN SANDPIPER: This was the most common shorebird on the flats at Portsmouth Island, N.C., in early August, with an estimated 4,000 present on 2 August, Richard Rowlett.

BUFF-BREASTED SANDPIPER: Two were seen at Ocracoke Island, N.C., on 20 August and one at Cape Hatteras, N.C., on 21 August by Richard Rowlett.

HUDSONIAN GODWIT: Several were present at Pea Island through the fall season. The earliest sighting was 21 August (Richard Rowlett), and at least one bird was still present as late as 4 November (Harry LeGrand, Edmund LeGrand, Sebastian Patti).

WILSON'S PHALAROPE: One was seen on 18 August at Bird Shoal off Morehead City, N.C., by John Fussell. Reports from several observers indicate that a few individuals were present at the Bodie Island lighthouse pond regularly from mid-August through September.

POMARINE JAEGER: One was seen over the beach at Oregon Inlet, N.C., on 4 October by James Pullman.

PARASITIC JAEGER: Ten were identified, including one in dark-phase plumage, along the beaches in the Bodie-Pea Island area on 7 October by Edmund LeGrand, Harry LeGrand, and Sebastian Patti. Other observers also reported small numbers seen near shore from Nags Head to Ocracoke during the first 2 weeks of October.

LAUGHING GULL: Four were seen at Lake Hartwell near Clemson, S.C., on 30 September, a rare occurrence of the species at that inland reservoir, Sidney Gauthreaux.

LITTLE GULL: An immature was seen well at Bodie Island, N.C., on 1 October by Paul DuMont, Harold Wierenga, and party.

FORSTER'S TERN: An individual was seen inland at Roanoke Rapids Lake, Halifax County, N.C., on 20 September by Merrill Lynch and another at Lake Wheeler near Raleigh, N.C., on 23 September by Robert Hader. At least 20 were also seen at Lake Hartwell near Clemson, S.C., on 30 September by Sidney Gauthreaux.

COMMON TERN: Near Wilmington, N.C., Jay Carter noted an unusually large flock of some 900 resting on a sand bar at Lockwood Folly Inlet on 23 September.

ROSEATE TERN: On the North Carolina Outer Banks at Oregon Inlet, an individual of this species was observed by James Pullman among a flock of Common Terns on 5 October.

CASPIAN TERN: Merrill Lynch recorded up to nine as inland migrants at Roanoke Rapids Lake, Halifax County, N.C., on 29 and 30 August and sighted another individual there on 15 November.

BLACK TERN: An impressive flight of at least 200 was seen coming in to roost at Elijah Lump near Morehead City, N.C., on 24 August by John Fussell.

BLACK SKIMMER: An estimated 6,500 were seen in the Morehead City, N.C., vicinity on 9 October by John Fussell and Paul DuMont.

GROUND DOVE: An occurrence was recorded as far north as Bogue Banks on the North Carolina coast where an individual was seen at Fort Macon State Park on 24 November, Robert Hader.

BLACK-BILLED CUCKOO: One was an early and uncommon migrant on the North Carolina Outer Banks at Nags Head on 18 August, Morgan Jones. Another was seen 9 October at Fort Fisher, N.C., by Paul DuMont.

LONG-EARED OWL: There were fall records of one seen in the coastal area at New Bern, N.C., during the second week of October by Robert Holmes, and another in the western piedmont at North Wilkesboro, N.C., on 18 November by Wendell Smith.

SAW-WHET OWL: One was banded near Sumter, S.C., on 7 November by Evelyn Dabbs.

YELLOW-SHAFTED FLICKER: On the coast James Parnell and Jay Carter observed a heavy southward movement at Fort Fisher, N.C., on 10 October involving hundreds of migrants.

PILEATED WOODPECKER: An observation of one on Bogue Banks, N.C., on 22 October by John Fussell was an uncommon record for that barrier island.

WESTERN KINGBIRD: One was seen near Morehead City, N.C., on 10 September by John Fussell. There were numerous other reports of fall migrants in the North Carolina coastal section with the largest numbers occurring, as usual, along the Outer Banks where high counts of 10 were recorded on Ocracoke Island on 23 October by Claudia Wilds and party, and eight at Duck on 28 October by Gilbert Grant.

YELLOW-BELLIED FLYCATCHER: A migrant was banded at Chapel Hill, N.C., on 4 September by Elizabeth and Robert Teulings. Sight records were reported of individuals at Occoneechee

Neck in Northampton County, N.C., on 9 September (Merrill Lynch); at Greenfield Lake, Wilmington, N.C., on 28 September (Kitty Kosh); at Umstead State Park near Raleigh, N.C., on 2 October (Harry LeGrand); and at Fort Fisher, N.C., on 9 October (Paul DuMont)

LEAST FLYCATCHER: An early transient was noted at Roanoke Rapids, N.C., on 22 August by Merrill Lynch, and one was banded on 2 September at Chapel Hill, N.C., by Elizabeth and Robert Teulings. Among several other sightings reported, the latest was from the coastal area where an individual was seen by Paul DuMont at Fort Fisher, N.C., on 9 October.

OLIVE-SIDED FLYCATCHER: A late sighting was recorded at North Wilkesboro, N.C., on 26 October by Wendell Smith.

BARN SWALLOW: Late fall stragglers were still present in the Bodie-Pea Island, N.C., area on 4 and 5 November, with at least 10 recorded by Edmund LeGrand, Harry LeGrand and Sebastian Patti.

BANK SWALLOW: Several early migrants were seen on 25 July at Whispering Pines, N.C., by Jay Carter.

CLIFF SWALLOW: One at Whispering Pines, N.C., on 25 July was an early fall record for that locality, Jay Carter.

FISH CROW: A locally unusual concentration was recorded inland at Roanoke Rapids Lake, Halifax County, N.C., where 178 were present on 18 October, Merrill Lynch.

BEWICK'S WREN: One seen on 4 November at Pea Island, N.C., by Edmund LeGrand was a rare Outer Banks record.

SHORT-BILLED MARSH WREN: A fall migrant was found inland near Raleigh, N.C., 16 September by Robert Hader.

PHILADELPHIA VIREO: Two records were reported from Bodie Island, N.C., where individuals were seen on 1 October by Robert Ake and Paul DuMont and on 8 October by Edmund LeGrand, Harry LeGrand, and Ross Silcock. Elsewhere along the coast, a fall transient was seen near Wrightsville Beach, N.C., on 23 September by Robert Teulings and another at Orton Plantation near Wilmington on 9 October by Paul DuMont. An inland migrant was seen at North Wilkesboro, N.C., on 18 September by Wendell Smith.

WARBLING VIREO: Individuals were noted on 22 August and 13 September at North Wilkesboro, N.C., by Wendell Smith.

WORM-EATING WARBLER: A migrant made an early appearance at Raleigh, N.C., on 20 August (Gail Whitehurst), and another was banded near Hillsborough, N.C., on 27 August (Russ Hoverman).

GOLDEN-WINGED WARBLER: One was banded at Sumter, S.C., on 17 August by Evelyn Dabbs. Paul DuMont recorded a rare coastal occurrence of a fall migrant at Bodie Island, N.C., on 20 August.

BLUE-WINGED WARBLER: One was noted near the coast at Wilmington, N.C., on 4 September by Kitty Kosh. In the piedmont, a total of four were recorded in the Roanoke Rapids, N.C., area between 21 August and 9 September by Merrill Lynch.

NASHVILLE WARBLER: An unusually late migrant was recorded at Bodie Island, N.C., on 25 November by James Pullman.

BLACK-THROATED GREEN WARBLER: One was recorded as an uncommon transient on the Outer Banks at Bodie Island, N.C., on 1 October by Robert Ake and Paul DuMont.

CERULEAN WARBLER: Individuals were seen in Northampton County, N.C., on 26 August by Merrill Lynch; near Raleigh, N.C., on 13 September by Edmund and Harry LeGrand; and at Fort Fisher, N.C., on 9 October by Paul DuMont.

BLACKBURNIAN WARBLER: One was an unusually early fall visitor at Raleigh, N.C., on 12 August, Ross Silcock. In the coastal area, rare occurrences were recorded at Orton Plantation where an individual was seen on 23 September by Jay Carter and on the Outer Banks where two birds were seen at Bodie Island on 1 October by Paul DuMont and Robert Ake.

BAY-BREASTED WARBLER: One was found dead on 10 September at Emerald Isle, N.C., by Russ Hoverman, the first well documented record for Carteret County.

CONNECTICUT WARBLER: An early fall sighting was recorded at Charlotte, N.C., on 24 August by Elizabeth Clarkson, and a late record at North Wilkesboro, N.C., on 7 November by Wendell Smith. Individuals were also seen at Bodie Island, N.C., on 7 October (Paul DuMont and party) and at Ocracoke Island, N.C., on 23 October (Claudia Wilds).

MOURNING WARBLER: Two records were reported from the coast where a transient was seen in the vicinity of Duck, N.C., on 1 October by Paul DuMont and another at Fort Fisher, N.C., by the same observer on 9 October.

WILSON'S WARBLER: An early fall migrant was seen on 3 September at Castle Hayne in New Hanover County, N.C., by Kitty Kosh. Other migrants were later noted in early October on the Outer Banks and at Fort Fisher, N.C., by several observers, and one was recorded inland at North Wilkesboro, N.C., on 13 October by Wendell Smith.

AMERICAN REDSTART: An early migrant was seen at Sunset Beach, N.C., on 13 August by Plumer Wiseman.

BOBOLINK: A flock of at least 500 was seen near Morehead City, N.C., on 10 September by John Fussell.

DICKCISSEL: One was seen on the Outer Banks near Duck, N.C., on 28 October by Gilbert Grant, and two appeared at a feeder in Elizabeth City, N.C., on 22 November, as reported by Frank Aycock.

HOUSE FINCH: Early arrival of winter visitors was noted at Greensboro, N.C., where Dot Garrett observed one at her feeder as early as 8 October. A sizable flock of 40 was counted in the Rose Garden at Raleigh, N.C., on 21 November by Robert Hader.

HENSLOW'S SPARROW: Two were seen in the vicinity of White Lake in Bladen County, N.C., on 19 October by Jay Carter.

SHARP-TAILED SPARROW: Two were found dead at the WECT-TV tower in Bladen County, N.C., 60 miles inland from the coast on 19 October by Jay Carter. Another inland occurrence was recorded in Northampton County, N.C., where an individual was seen at Johnston's Farm in the Occoneechee Neck area on 1 October by Merrill Lynch.

SEASIDE SPARROW: Two were among casualties found at the WECT-TV tower in Bladen County, N.C., on 19 October by Jay Carter. This locality is 60 miles from the coast.

LARK SPARROW: One appeared at F.M. Probst's feeder at Pawley's Island, S.C., on 10 August. Another early fall visitor was seen at Wright Brothers Memorial at Kitty Hawk, N.C., on 22 August by Richard Rowlett.

BACHMAN'S SPARROW: Two were noted singing near Atlantic in Carteret County, N.C., on 20 August by Richard Rowlett.

CLAY-COLORED SPARROW: Fall occurrences were recorded on the North Carolina Outer Banks where an individual was seen at Bodie Island marina on 7 October by Gilbert Grant, Robert Ake, et al., and two at Pea Island NWR on 8 October by Edmund LeGrand, Harry LeGrand, and Ross Silcock.

WHITE-CROWNED SPARROW: Three were found near Bethania in Forsyth County, N.C., on 26 October by Ramona Snavely, Ruth Hill, et al.; and an individual was seen at Clemson, S.C., on 29 October by Sidney Gauthreaux. Elsewhere, seven were seen together in a small flock at Johnston's Farm in the Occoneechee Neck section of Northampton County, N.C., on 12 November by Merrill Lynch; and one was found near White Lake in Bladen County, N.C. on 19 October by Jay Carter.

LINCOLN'S SPARROW: In the coastal area an individual was seen at Pea Island, N.C., on 1 October by Robert Ake; one at Fort Fisher, N.C., on 9 October by Paul DuMont; and one at Wilmington, N.C., on 29 October by Kitty Kosh. Inland, one was recorded at Columbia, S.C., on 26 October by Bruce Mack.

LAPLAND LONGSPUR: One was closely observed near Wrightsville Beach, N.C., on 25 October by Frank Sessions, fide James Parnell.

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C49
Birds

The Chat

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Vol. 37 June 1973 No. 2

The Chat

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OUR COVER—Joel Arrington photographed a Great Egret (formerly Common Egret) family at Battery Island, N.C. (Photo courtesy of N.C. Wildlife Resources Commission.)

BREEDING BEHAVIOR
OF THE SUMMER TANAGER

ELOISE F. POTTER

In the spring of 1968 the first male Summer Tanager (*Piranga rubra*) of the season appeared on 2 May in the wooded yard of our home 3.5 miles N of Zebulon, Wake County, N.C. Shortly thereafter another red-plumaged tanager arrived. The second bird was only a slightly less brilliant shade of scarlet-orange than the normal male Summer Tanager, apparently because of olive-green edges on feathers of the nape and back. The easiest way to distinguish the two tanagers was by bill color because the normal male had a predominantly yellow bill while the other bird had an olive-brown bill. Having satisfied ourselves that the strange bird was indeed a Summer Tanager in unusual plumage rather than some other species, my husband and I assumed it to be a young male. However, we could not understand why the normal male tolerated a rival in his territory, and we were puzzled by the apparent absence of a female in the yard.

On 24 June I discovered a Summer Tanager nest about 24 feet above ground level in a white oak (*Quercus alba*). The shallow cup of grasses was saddled on a horizontal limb extending over our carport, and a piece of nesting material about a foot long dangled beneath the nest. The incubating bird had red plumage, which surprised me because I was under the impression that male Summer Tanagers do not incubate eggs or brood young. While I was trying to determine which of our tanagers was on the nest, the normal male darted toward it to aid the incubating bird in driving away an unidentified bird. These two red-plumaged birds repeatedly engaged in courtship feeding while the eggs were being incubated, and two apparently normal young Summer Tanagers fledged from the nest. Although no specimen was taken, I am positive that the unusual bird was an adult female Summer Tanager in completely red plumage (Teulings, in press).

The fact that the female Summer Tanager in our yard was red prompted me to study the pair closely, particularly after I found that even Bent's *Life Histories* (1958) offered scant information on breeding behavior of the species and development of the young. In 1968 and 1970 I spent a total of 10 hours watching and taking notes on nesting activities of two pairs of Summer Tanagers for periods of 30 minutes to 2 hours at a time. These notes plus random observations from other nesting seasons indicate wide variations in the breeding behavior of Summer Tanagers.

NEST SITE SELECTION

Bent (1958) notes the species' propensity for locating nests on horizontal limbs overhanging roadways, and I have never seen a Summer Tanager nest that was not adjacent to some type of clearing in a wooded area. In 1966 tanagers built about 10 feet above ground at the top of a small bent-over sourwood (*Oxydendrum arboreum*) beside our driveway. On 3 June 1967 I found a tanager nest overhanging a wide woodland path just as it opened into a clearing beside Moccasin Creek in Franklin County, N.C. In the clearing was a large stump containing a beehive. The female's trips from the hive to the nest gave away its location. The 1968 nest, as I mentioned earlier, was in a white oak overhanging our carport; and the 1970 nest was in the same tree about 20 feet above ground on the side above the driveway. In 1971 I found no Summer Tanager nest, but in 1972 a tanager again built in the white oak above the driveway.

A male Summer Tanager held territory around the white oak and sang persistently throughout the 1969 nesting season even though the attempted nesting was not successful. A yellow-plumaged female was present and once carried nesting material into an oak on the other side of the house where there is no sizable opening in the canopy. She never completed the nest, and I saw no evidence that the pair produced eggs or young. Apparently an inability to agree on a site, or perhaps the female's choice of an unsuitable site, prevented breeding.

NEST CONSTRUCTION

The earliest recorded date I have for the arrival of the Summer Tanager in spring is 20 April. Nests are generally completed by late May, and all I have seen were shallow and slipshod – even to the extent of having a foot-long strand of grass waving in the breeze. The 1966 nest was made entirely of bright yellow straw used to protect glass during shipment. The female made frequent trips from the carport where the packing cases were stored to the sourwood across the driveway, attracting the attention of the men building our house. Other nests were less colorful, but the two examined in hand were made of straw and grass. I have never seen a male Summer Tanager carrying nesting material. Females gather building material from the immediate vicinity of the nest and work mostly in the early morning hours.

INCUBATION

Audubon (1840) says that the "male and female sit upon [the eggs] alternately for twelve days." This most certainly is not the case at Zebulon. I have seen several different females leave the nest repeatedly and return to it without being relieved by their mates. This agrees with Mengel (1965), who reports incubation by the female only. Audubon's figure of 12 days for incubation is widely accepted.

The 1968 female always sat on the nest facing SW. Although the male often flew near the nest in company with the returning female, to bring her food, or in pursuit of intruders, I never saw him touch the nest itself until after the young had hatched. The intervals at which the female left the nest to feed varied from about 10 minutes to nearly an hour; but she generally sought food about every 20 minutes. The longer intervals occurred when it had been necessary to defend the nest. Regardless of the length of time since her last feeding, the female rarely left her eggs unattended for as much as 5 minutes. If she became inattentive, the male would drive her back to the nest, sometimes hovering over her until she settled on the eggs.

Behavior of the 1970 female was quite different. She sat on the nest facing several directions, never made the least effort to drive away intruders, and sometimes stayed away from the nest so long that I thought it was abandoned.

HATCHING AND DEVELOPMENT

The first egg hatched on 7 June in the 1966 nest and between 4 and 10 June in the 1970 nest. The two young in the 1968 nest hatched on or about 2 July, a rather late date for our area. In 1966 I found a shell fragment under the nest, and in 1968 I found one about 125 feet from the nest.

The birds that hatched on 2 July 1968 were the only ones that fledged from the three nests in our yard that contained young. Adult tanagers were first seen feeding these chicks on 3 July, and by 6 July the nestlings could raise their heads above the rim of the nest. They left the nest either late in the ninth day after hatching or very early the next morning, probably as a result of the heavy rainfall the night of 11-12 July. Although the nest appeared undisturbed, I thought surely the young must have fallen to the roof of the carport and perished. On 14 July I heard the calls of young birds and found one juvenile tanager in the white oak that held the nest and another in a sourwood just across the driveway. Both young birds were in typical juvenile plumage, olive-yellow above and dull yellow streaked with olive below. Their bills were large and yellow. Attended by both parents, they could barely flutter from one perch to another. On 15 July the young birds were flying better and had moved farther from the nest tree, though still within 100 feet of it. One softly sang a primitive version of the male song. On 16 July no tanagers could be found in the yard.

CARE OF NESTLINGS

Feeding. Male Summer Tanagers may or may not share responsibility for feeding nestlings, but I suspect they do help the female in nearly all successful nestings.

In 1968 the male helped feed his offspring. The morning of 3 July the female returned to the nest with food for the newly hatched young at 08:59 EDT. At 09:11 she left the nest, captured an insect, and fed the young. The male approached and called to her; she flew to his perch and fluttered her wings like a baby bird until he had fed her. They flew together toward the nest where she fed the food the male had given her to the young and began brooding them as the male departed. At 09:14 the male approached the nest. The female moved aside long enough for him to feed the young, but she stayed at the nest and immediately resumed brooding. The male had perched on the rim of the nest facing NE for what appeared to be his first attempt to feed the nestlings, but thereafter he perched facing SW as the female invariably did when feeding them. Actual times between feedings ranged from less than a minute to 24 minutes, with the average interval being about 10 minutes. The longer intervals took place when an intruder had approached the nest, and the shorter ones when both parents fed the young in rapid succession. The male and female usually alternated in bringing food to the chicks.

In 1970 the male refused to help feed the young although he had occasionally brought food to the incubating female when she begged. Once she left the nest with young in it and flew out of sight for 22 minutes, returned to feed the chicks, and immediately departed again. During her prolonged absence the male defended the nest from an Eastern Wood Pewee (*Contopus virens*) with flagging determination, but he made no attempt to feed or brood the baby birds.

Brooding. To the best of my knowledge only females brood the young. The 1968 female always sat on the nest facing SW while brooding, the same as she did during incubation. The 1970 female faced several directions. Both females tended to stay away from the nestlings longer in the middle of the day than in the cool early morning hours.

Nest sanitation. I have never seen a Summer Tanager carry a fecal sac from the nest. On several occasions the 1968 female poked her bill into the nest before leaving to forage for food. Once she made swallowing motions immediately after raising her head, and I assume she was swallowing a fecal sac.

COURTSHIP FEEDING

In 1968 the male Summer Tanager was particularly attentive to the incubating female during the early morning hours, but later in the day he spent most of his time singing and preening. Courtship feeding most often took place when the male perched on a bare limb beneath the nest and the female flew directly from the nest to him. If the male did not voluntarily bring food when the female wanted it, she flew to the favorite perch and cried like a baby bird. When the male approached, she assumed a begging posture and fluttered her wings. Usually he brought food in response to this behavior, but sometimes he merely drove her back to the nest. Occasionally he completely ignored the performance, whereupon she either found food for herself or returned to the nest without eating. Sometimes courtship feeding took place on various other perches near the nest tree, but the one nearest the nest was definitely preferred. The male was last seen feeding the female the morning of 3 July, immediately before he was first seen feeding the young in the nest. On 6 July the female approached the male and begged, but he flew to the nest and fed the young instead of feeding his mate. The 1970 pair also engaged in courtship feeding, but not so frequently as did the 1968 pair.

SONG

Male Summer Tanagers usually sing persistently from the time they arrive on the nesting grounds until late July whether the nesting attempt is successful or not. An exception to this behavior appears to occur when the male loses his mate. The 1972 male had conspicuous yellow sides that marked him as an individual. His mate's nest in the white oak was found disturbed on 12 June, and she had disappeared. Although the yellow-sided male remained in the vicinity at least throughout June, I never heard more than an occasional "pi-tuck" following the loss of his mate.

TERRITORY AND NEST DEFENSE

In 1968 and 1970 the adult Summer Tanagers ranged in search of food over about 2 acres of mixed pine and deciduous woods as well as an approximately equal area of the adjoining fairway of the Zebulon Country Club.

The 1968 pair defended from intruders the nest tree, a peanut butter paste feeder about 20 feet from the nest, and some favorite perches about the same distance to the other side of the white oak. While the male usually responded promptly to his mate's cries of alarm, I never saw him drive away an intruder without her assistance. Blue Jays (*Cyanocitta cristata*) were chased from the nest tree or paste feeder almost daily during the period of observation. On one occasion the female drove a Carolina Chickadee (*Parus carolinensis*) from the nest tree, and on 3 July both parents pursued an adult male Cardinal (*Cardinalis cardinalis*) that had been attracted by the cries of the nestlings.

The 1970 male had complete responsibility for nest defense whether the female was on the nest or not. Once an Eastern Wood Pewee approached the nest after the female had been off it for 6 minutes. The male chased the pewee away and called nervously from a perch in the white oak. Eight minutes later the pewee returned, and the male tanager, still calling nervously, allowed the intruder to share his perch. Another 8 minutes elapsed before the female returned, fed the nestlings, and immediately departed again.

In both 1968 and 1970 the male bird frequently accompanied the female as she returned to the nest, always flying slightly below and behind her. Having escorted her to the branch holding the nest, he would fly away without actually alighting. In departing he made a great show of activity while the female crept along the branch toward the nest. This protective measure appeared to be moderately effective in diverting the eye of the observer from the 1968 female in spite of her bright plumage. It was highly effective when performed by the normally colored pair in 1970.

MAINTENANCE ACTIVITIES

Feeding. In general the tanagers fed in accordance with the published literature (Bent, 1958). They liked the peanut butter paste offered at one feeder, and they caught many bees on the wing or in the sourwoods. They often sought insects under the overhanging roof. Twice in 1968 I saw a tanager, apparently the female, feeding on the wing at night in the area illuminated by exterior lights attached to the carport.

Bill wiping. The 1968 female tanager wiped her bill on several occasions both after feeding on paste and after receiving unidentified food from the male. The 1968 male wiped his bill once after drinking water at the bird bath. The 1970 male wiped his bill once after returning to the nest area from the direction of the spring.

Plumage care. In 1968 both adults preened frequently during the incubation period, with the male devoting much more time to plumage care than did the female. Neither bird was seen preening while caring for young in the nest. Feather maintenance was certainly greatly reduced during this period if not completely discontinued. Although the male Summer Tanager frequently visited the bird bath to drink, I never saw him bathe. He sunbathed for about 4 minutes the morning of 26 June.

On 12 May 1972 I saw an adult male Summer Tanager bathing at 15:00. The bird had conspicuous yellow sides that marked him as an individual. He returned to bathe at the same bird bath on 13 May at 14:30. The next day he had attracted a mate. I did not see him bathe again during the rest of May or throughout the month of June even though the attempted nesting ended unsuccessfully on 12 June.

AFTER THE NESTING SEASON

Once the young can fly well enough, the Summer Tanager family moves away from the nesting site. I have never had an opportunity to watch a family party long enough to determine at what age the parents stop feeding the young. Some male Summer Tanagers continue singing until late July. After they stop singing they are inconspicuous and rarely use prominent perches the way they commonly do in the nesting season. Consequently I have few fall records for the species. On 9 September 1968 the red female Summer Tanager appeared briefly at the paste feeder with the bluebirds and their companions. Two juveniles were banded on 15 September 1970 during what appeared to be a major migratory movement through the area. Another juvenile banded on 26 September 1970 associated regularly with the bluebirds from then until mid-October, joining them as they feasted on poke and dogwood berries.

DISCUSSION

Of the five adult female Summer Tanagers that have attempted to nest in our wooded yard near Zebulon, N.C., one was all red and nearly as bright as the male. Three of the five females hatched young, but only the all-red one brought hers off the nest. Her mate was attentive to her during incubation, helped protect the nest from intruders, and shared in the feeding of the young but did not brood them. Another pair nested in the same tree 2 years later. Although this male defended the nest and occasionally fed the female when she begged, he did not help feed the young. The female did not assist him in driving away intruders. While I do not know whether the young starved to death or were taken by a predator, I am certain that the lack of cooperation between the parent birds contributed directly to the unsuccessful outcome of the nesting. Frequent courtship feeding apparently forms a strong pair bond and prepares the male for feeding the young, thus giving the nestlings a better chance of survival than those dependent upon the female alone for all their nourishment.

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P.O. Box 277, Zebulon, N.C. 27597, 15 January 1972.

PLUMAGE VARIATIONS IN THE SUMMER TANAGER

ELIZABETH TEULINGS

Since 1964 I have banded 55 Summer Tanagers (*Piranga rubra*) at my home near Chapel Hill, N.C. Of these, 20 (16 adults and 4 juveniles) showed mixed red and yellow plumage of great variability.

Summer Tanagers are classified as males if they show cloacal protuberance, as females if they have an incubation patch, and as juveniles if they have unossified skulls. The plumage is considered normal when males are red; females are olive-yellow above, yellow below; and juveniles are as females.

Table 1 gives the plumage characteristics for 38 adult Summer Tanagers banded at Chapel Hill, 22 normal birds and 16 in mixed plumage. Of the 17 juveniles banded during the same period (1964-1970), four showed tinges of red in the olive-yellow plumage.

Five banded Summer Tanagers have been retrapped at my home station one or more times. Although the size of the sample is small, descriptions of these five returns indicate plumage variations far more striking than any mentioned in Bent's *Life Histories of North American Blackbirds, Orioles, Tanagers and Allies* (1958).

MALE RETURNS

Band No. 105-106264: adult male banded 20 May 1966 (in breeding condition)
  Body above: red except for scattered yellow spots
  Body below: red breast; yellow belly and flanks
  Wings: yellow primaries, secondaries and primary coverts; red tertiaries and remaining coverts
  Tail: Red
Returned: 14 May 1969 and 7 May 1970
  Plumage at return: both times normal red adult male

Band No. 106-139255: adult male banded 10 May 1967 (in breeding condition)
  Plumage at banding: normal red adult male
Returned: 25 May 1968 and 7 May 1970
  Plumage at return: both times normal red adult male

Band No. 106-139284: adult male banded 16 May 1967 (in breeding condition)
  Body above and below: red so evenly spotted with yellow that the bird seemed polka-dotted
  Wings: yellow except for red tertiaries and a few red marginal coverts
  Tail: red except for number 5 rectrices that are yellow
Returned: 30 April 1969
  Plumage at return: normal red adult male

FEMALE RETURNS

Band No. 107-025108: adult female banded 25 June 1968 (incubation patch)
  Body above and below: yellow splotched with red and orange
  Wings: yellow except for tertiaries and a few lesser coverts that are red
  Tail: center red (1-3 rectrices), outer feathers yellow (4-6 rectrices)
  Undertail coverts: mostly red

TABLE 1.

Plumage characteristics of 38 adult Summer Tanagers banded at Chapel Hill, N.C., 1964-1970.

	Normal Males	Normal Females	Mixed Plumage Male	Mixed Plumage Female	Mixed Plumage Unknown
1964	2	2	1	0	1
1965	2	7	1	1	3
1966	3	1	2	0	0
1967	1	0	1	0	1
1968	1	2	1	1	0
1969	0	0	1	1	0
1970	1	0	1	0	0
Total	10	12	8	3	5

Returned: 13 May 1969

Plumage at return: mixed (generally more red)

Body above and below: yellow splotched with red

Wings: predominantly yellow. Primaries 1-6 and their coverts all yellow, remaining primaries and coverts yellow with red edgings. Secondaries show red edgings except for sevenths, which are both yellow. Greater secondary coverts are yellow except for 6, 7, and 9 (orange) and 8 (red). Some lesser wing coverts are red. Linings show some red in marginals and axillars.

Tail: yellow

Undertail coverts: show generous amount of red

Band No. 107-190025: adult female banded 13 May 1969 (incubation patch)

Body above and below: yellow with a few red-orange feathers on crown, rump, undertail coverts

Wings: predominantly yellow. Primaries 7, 8, and 9 have red edgings as do secondaries 4-9; all coverts yellow.

Tail: yellow

Returned: 10 May 1970

Plumage at return: normal yellow female

Aberrant plumage in female Summer Tanagers has previously been noted. Johnston (1951) collected an adult female Summer Tanager in mixed plumage on 17 May 1950 in Clarke County, Georgia. His red and yellow specimen resembled an adult male but was generally less bright than the average red male and had patches of olive-green in the upper parts. Under parts were a mixture of dull red and buffy yellow generally splotchy with the brightest red around the throat.

On 24 June 1968 Eloise Potter found an all red female Summer Tanager incubating eggs. The bird was mated to a normal red male and the young fledged from the nest were typical olive-yellow juveniles with no noticeable traces of red or orange in their plumage.

Details of this bird's successful nesting appear in "Breeding Behavior of the Summer Tanager" (Potter, in press).

Reports of red female tanagers bring to mind a statement by Audubon (1840): "My friends Mr. Harris and Dr. Trudeau have procured female Summer Red-birds almost as red as the males. They were obtained while breeding, and I am informed by these gentlemen that such cases are not rare!" However, Audubon does not mention this plumage variation in his detailed description of the adult female Summer Tanager or illustrate it in his colored plates.

The birds described above certainly raise more questions than they resolve about plumage variations in the Summer Tanager. Apparently males of mixed plumage eventually become all red and remain so, but the age by which they don normal adult male plumage is unknown. One female in mixed plumage banded at Chapel Hill returned in mixed plumage the next year but another female returned in normal adult plumage within a year. Therefore, age does not seem to be a factor in the amount of red in female plumage. This means that the female tanagers noted by Dr. Johnston, Mrs. Potter, and Audubon's friends could be either young birds that would eventually turn yellow or old birds that had been yellow or mixed in plumage.

In conclusion, I offer the comments of Austin (1961), who notes that although the four migrant tanager species that nest in temperate North America show strong sex differences, "gay colors the year round are a hallmark of the family (222 species), and female tanagers are usually as brightly colored as the males." Possibly then, the redness in female Summer Tanager plumage is a reversion to a characteristic that dominated when the species lived in the tropics.

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Route 2, Chapel Hill, N.C. 27514, 31 July 1972.

Conservation

. . . with Marie Mellinger

South Carolina has a new organization, called Campaign Clean Water, formed to "reclaim and protect the waters of South Carolina. Any one interested can write Campaign Clean Water, Post Office Box, Capital Station, Columbia, S.C. Hopefully, this will be citizens from all over South Carolina, working to curb pollution and keep away threatened ocean dumping, dredging, and damming.

R and E

The words "rare and endangered species" appear with increasing frequency in almost any publication one picks up. S. Dillon Ripley of the Smithsonian Institution estimates that a majority of our animal species will be extinct by the year 2000! The Farm Index states that 34 million acres of rural land, much of it wildlife habitat, will disappear as cities and highways continue to sprawl across the land.

In Georgia, three rare and endemic species of pocket gophers are now extinct. Bob Hiilestod, chairman of the rare and endangered species committee of the Southeast section of the Wildlife Society, blames over zealous museum collectors for reducing the population. Since the animals stayed within a small area, a population could be wiped out or severely reduced in one day.

In the *Auk* of April 1973, an article on Cattle Egret foods states, "About 1000 Cattle Egrets were shot in late afternoons at four roosts in Alachua and Marion Counties, Florida between 19 June and 16 July 1969 in connection with another study being made on endoparasites." Florida must consider the Cattle Egret on a par with the Starling!

In the same publication, for January 1973, an article on bird collections states, "American collections contain many thousands of some widely distributed, abundant species, but few or none of the other, rarer forms." They go on to justify scientific collecting, but it is all too easy to collect the "rare forms" into extinction. The so-called ornithologist who boasted of killing 35 Ivory-billed Woodpeckers did this at a time when the species was already well on the way to extinction.

Thirty-five tribes of American Indians, and over 220 other species of animals are now extinct. New York's Bronx Zoo has erected a graveyard exhibit with a headstone for each extinct animal species (except man). Once an animal species is extinct it is dead and buried, nothing will ever bring it back to life.

In the Anderson *Independent* of 5 February 1973, there was an editorial entitled "Endangered." In this the editor writes of efforts to save the kangaroo in Australia, and goes on to say, "Among other instances we note that an international organization has been formed to protect the peregrine falcon; that the government of India has been making efforts to protect the Bengal tiger; that the Soviet Union is cracking down on illegal hunting of sable; and that our own government has been cracking down on hunters who have been mindlessly killing off the American golden eagle.

"Still, we can't help reflecting that there is another endangered species on this planet and wishing that more positive efforts were being made toward curbing its own predatory propensities against itself. We are referring, of course, to man."

Dr. Hugh Iltis wrote, "If we in our human preoccupation let all but corn and cow slide into the abysmal finality of irreversible extinction, our species indeed will have committed ecological suicide."

But Harold Martin, in a column about the new organizations formed to try and protect endangered species sums it all up, by saying, "The friends of the animals know that all of us, men and animals alike, are part of the infinitely complex and fragile fabric that makes up the natural world around us. And when any species is destroyed, even one so seemingly insignificant as the prairie dog, we are all the lesser for it."

And an added note: Buy and use the new endangered species stamps put out by the National Wildlife Federation.

New and Timely

It is already too late for one North Carolina river; *Conservation News* of 1 February 1973 contains an obituary for the Chowan River, ruined by chemical pollution.

****

North Carolina Legislature failed to pass the coastal lands management act and a state land use planning act, both vitally needed for protection of the environment.

****

South Carolina has a Special Study Committee on Land Use Planning headed by Lt. Gov. Earle E. Morris. Hopefully they will consider "land as a resource, instead of just a commodity to be bought and sold."

****

And on a cheerful note: The federal government has granted $89,000 to preserve the 85-acre Hemlock Bluffs near Raleigh, N.C. Pinckney Island in South Carolina has been set up as a wildlife area under The Natural Land Trust, Inc., and the Federal Bureau of Sports Fisheries and Wildlife.

CBC Roundtable

In Memoriam
ANNIE RIVERS FAVER

Annie Rivers Faver, 64, of Eastover, S.C., died 28 May 1973, several days after she had suffered a heart attack. Toncie edited "Backyard Birding" for *Chat* from 1951 until 1968 and recently returned to the staff as editor of "CBC Roundtable." She also wrote "Bird Notes" for *The State* and worked tirelessly to promote interest in bird study and conservation. Appropriately, her last article for *Chat* asked a question, "Are there any records of birds feeding on mushrooms?" Her mind was always reaching out for new ideas, always seeking a better understanding of the world around her.

CHANGES IN NOMENCLATURE

Beginning with the present issue of *Chat*, readers will note numerous changes in common and scientific names of birds made in accordance with the "Thirty-second Supplement to the American Ornithologists' Union Check-list of North American Birds" that appeared in the April 1973 issue of *Auk*, pages 411-419. Some of these changes (lumps and splits) are for taxonomic reasons. Others will be required by the inclusion of Middle America and the West Indies in the next edition of the *A.O.U. Check-list.* In the summary given below an asterisk (*) follows the newly accepted common name. For changes in scientific names and a statement of policy regarding English names, we refer you to the committee report mentioned above.

LUMPS AND SPLITS

Great White Heron merged with Great Blue Heron.*
Blue Goose merged with Snow Goose.*
Green-winged Teal* merged with Common Teal.
Harlan's Hawk merged with Red-tailed Hawk.*
Thayer's Gull* now attains species rank. [See GFN this issue.– Ed.]
Red-shafted, Yellow-shafted, and Gilded Flickers are merged as Common Flicker.*
Empidonax traillii is split into *Empidonax traillii*, Willow Flycatcher* (southern-western "fitz-bew" type), and *Empidonax alnorum*, Alder Flycatcher* (northern-eastern "fee-bee-o" type). [Voice type will be required for field identification of these two species. – Ed.]
Black-eared Bushtit merged into Bushtit.*
San Lucas Robin merged into Robin, which is now American Robin.*
Bahama Honeycreeper merged with Bananaquit.*
Socorro Warbler merged with Pitiayumi Warbler, now Tropical Parula.*
Parula Warbler becomes Northern Parula.*
Audubon's and Myrtle Warblers merged into Yellow-rumped Warbler.*
Bullock's and Baltimore Orioles merged into Northern Oriole.*

Cassidix mexicanus split into *Cassidix mexicanus*, Great-tailed Grackle * (southwestern subspecies), and *Cassidix major*, Boat-tailed Grackle* (eastern and northern subspecies).
McGregor's and Guadalupe House Finches merged into House Finch.*
Ipswich Sparrow merged into Savannah Sparrow.*
Dusky Seaside Sparrow and Cape Sable Sparrow merged into Seaside Sparrow.*
Slate-colored, White-winged, Oregon, and Guadalupe Juncoes merged into Dark-eyed Junco.*
Mexican Junco and Baird's Junco merged into Yellow-eyed Junco.*

FURTHER CHANGES

Fulmar becomes Northern Fulmar.*
Pale-footed Shearwater becomes Flesh-footed Shearwater.*
Slender-billed Shearwater becomes Short-tailed Shearwater.*
Leach's Petrel becomes Leach's Storm Petrel.*
Wilson's Petrel becomes Wilson's Storm Petrel.*

[Other Hydrobatidae become Storm Petrels or Storm-Petrels or Storm-petrels. There seems to be some question as to whether the Check-list Committee intended to hyphenate this name, and if so, whether or not to capitalize *petrel.* Until there is a published correction, *Chat* will omit the hyphen. – Ed.]

Common Egret becomes Great Egret.*
Wood Ibis becomes Wood Stork.*
Widgeon is now spelled Wigeon.*
Shoveler becomes Northern Shoveler.*
Common Scoter becomes Black Scoter.*
Gray Sea Eagle becomes White-tailed Eagle.*
Pigeon Hawk becomes Merlin.*
Sparrow Hawk becomes American Kestrel.*
Harlequin Quail becomes Montezuma Quail.*
Upland Plover becomes Upland Sandpiper.*
Knot becomes Red Knot.*
Catbird becomes Gray Catbird.*
Yellowthroat becomes Common Yellowthroat.*

While the changes listed above will undoubtedly cause a considerable amount of confusion and consternation among bird watchers, they do not present as many problems as one might suppose. "Great White Heron" is still properly used to designate the white morph of the Great Blue Heron, and "Blue Goose" refers to the dark morph of the Snow Goose. "Eurasian Green-winged Teal" and "American Green-winged Teal" are now used to indicate the component subspecies groups of the Green-winged Teal. "Yellow-shafted Flicker" is the subspecies of the Common Flicker found in the Carolinas. When circumstances do not permit specific identification of the Willow and Alder Flycatchers, "Traill's Flycatcher" remains available for the complex. The following names are among those still available for their respective subspecies or subspecific group: Myrtle Warbler, Audubon's Warbler, Baltimore Oriole, Bullock's Oriole, Ipswich Sparrow, Dusky Seaside Sparrow, Cape Sable Sparrow, Slate-colored Junco, and Oregon Junco. Thus only Savannah Sparrow will appear on the list of species for the next Christmas Bird Count, but a compiler could properly note in his comments the occurrence of a certain number of "Ipswich Sparrows." Do not hesitate to call "Myrtle Warblers" and "Baltimore Orioles" by their familiar names, but please remember you are now talking about a subspecific group rather than a full species. Confused? You are not alone. When in doubt about the correct form, please use the names in your field guide and let the staff worry about the new names. We occasionally get items using names that went out of style in 1957. The important thing is to keep those Postal Service people busy delivering notes and papers to the department editors of *Chat.* – EFP

General Field Notes

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Second Specimen of Leach's Storm Petrel Collected in North Carolina

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29 September 1972

Blem and Sonneborn recently reported the first collection of a specimen of Leach's Storm Petrel (*Oceanodroma leucorhoa*) in North Carolina (*Chat*, 36:29) in November 1969. Following the passage of Hurricane Agnes 22 June 1972, a second Leach's Storm Petrel was found alive at Atlantic Beach, N.C. The bird was discovered by unknown teenagers and brought to the attention of the authors. Attempts were made to maintain the bird, but it quickly died. The specimen was frozen immediately. Subsequent measurements (mm) of the bird by Harry LeGrand and Elizabeth Teulings were: wing, 161; tail, 85; tarsus, 25; culmen, 17. Now on deposit at the North Carolina State Museum of Natural History, the specimen is the first Leach's Storm Petrel at the museum and, as far as is known, in North Carolina.

Leach's Storm Petrel and Other Pelagic Birds Seen off North Carolina Coast

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29 September 1972

During the period 25 to 28 June 1972, within 4 days of the passage of Hurricane Agnes along the North Carolina coast, I was aboard the R/V *Eastward*, Duke University's oceanographic research vessel, in the general area from SE of Morehead City of NE of Cape Hatteras. Each evening, using 7 x 50 binoculars and 20X spotting telescope, I maintained a lookout for pelagic birds. My records are as follows:

25 June 1972, 18:00 to 19:30. Moderate seas, wind 20 knots, clear. Location at 18:45 was 33°56' N, 76°08' W, and about 40 miles offshore.

8 Wilson's Storm Petrels (*Oceanites oceanicus*)
5 Leach's Storm Petrels (*Oceanodroma leucorhoa*)
2 Audubon's Shearwaters (*Puffinus lherminieri*)

26 June 1972, 18:15 to 19:45. Calm seas, wind 5 knots, clear. Location at 19:00 was 34°19' N, 75°54.5' W, and 25 miles offshore.

20 Wilson's Storm Petrels
1 Greater Shearwater (*P. gravis*)
2 Cory's Shearwaters (*P. diomedea*)

27 June 1972, 18:30 to 19:45. Calm seas, wind 1 to 2 knots, clear. Location at 19:00 was 35°49' N, 74°43.5' W and 30 miles offshore.

45 Wilson's Storm Petrels
3 Greater Shearwaters
1 Cory's Shearwater

Of special interest in the above list was the observation of Leach's Storm Petrels on 25 June. Some individuals were seen as close as 30 yards from my vantage point, the boatdeck of the stern of the *Eastward.* The Leach's were contrasted with the Wilson's Storm Petrels by the appearance of a forked tail and the absence of feet extending beyond the tail. At some angles, when viewed from the lateral aspect, the feet of Wilson's extending beyond the tail may produce an illusion of a forked tail. Therefore, only those birds were identified as Leach's Storm Petrels which showed a forked tail from a full dorsal or ventral view. Because of the moderate winds which caused all petrels to fly close to the water between crests of waves, I did not find the erratic flight of Leach's Storm Petrel (Peterson, *A Field Guide to the Birds*, and Alexander, *Birds of the Ocean*) to be a particularly significant distinguishing characteristic. I feel confident of my ability to recognize the Leach's Storm Petrel, having held and studied one in hand only 3 days before the sighting (McCrimmon et al., see above).

In 1967 Williams and Williams (*Chat*, 32:45) reported the first sighting of Leach's Storm Petrel in North Carolina waters during late May and early June. The present records thus provide confirmation of the occurrence of this species in June.

These observations were conducted during a period when support, in part, was furnished to McCrimmon by a Grant from the Chapman Memorial Fund of the American Museum of Natural History.

[Dept. Ed. – The separation of Leach's Storm Petrel from Wilson's Storm Petrel under field conditions is extremely difficult. In view of the recent collections of two Leach's Storm Petrels from the North Carolina coast, it appears that this species may be more common than realized. Well documented visual records thus may help to add to our knowledge of this species. However, all such records even when well documented by careful experienced observers are open to some question. Therefore all identifications should be made with extreme caution, and acceptance and publication will always be tentative with this species.]

Disorientation of Migrating Shorebirds at Beaufort, N.C.

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Received 5 November 1972

I have birded in the Beaufort, N.C., region for several years and am well aware that this is not a good area to observe flocks of shorebirds that are unquestionably in migratory flight. There are several reasons for this, including: an east-west beach that tends to disorient southward moving shorebirds, a wide expanse of estuaries that

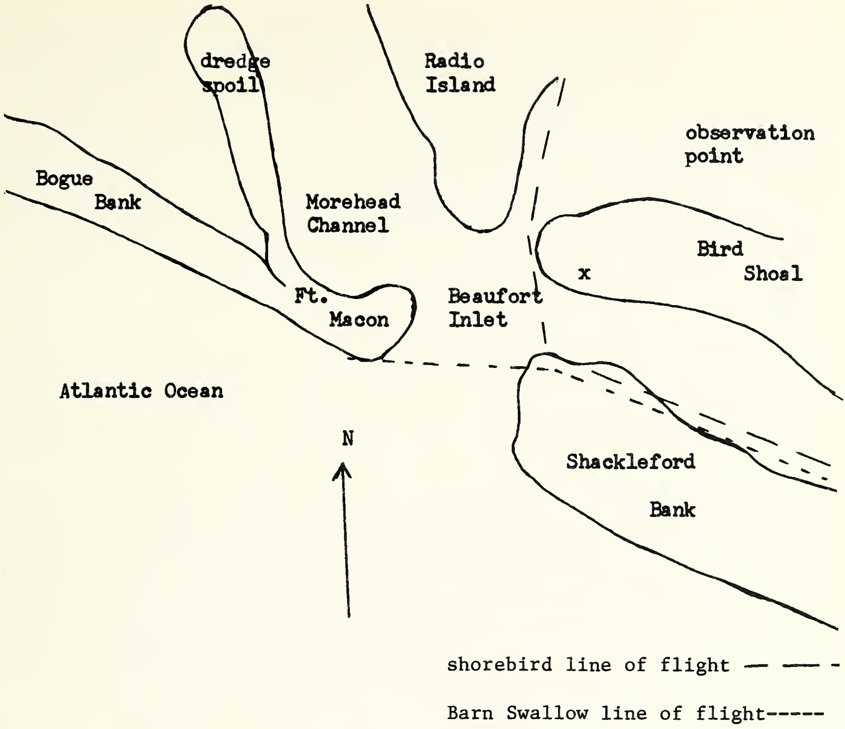

Figure 1. Flight path of disoriented shorebirds and normally moving Barn Swallows.

disperses flights of shorebirds, and regular local movements of shorebirds to and from Bird Shoal in Beaufort Inlet, which are regulated by both time and tide.

On 6 August 1972, following the passage of a cold front on the previous night, I observed migrating shorebirds apparently becoming disoriented by the local topography. Between 08:00 and 10:00 EDT I watched as several flocks of shorebirds, primarily Sanderlings (*Crocethia alba*), plus several Barn Swallows (*Hirundo rustica*) crossed Beaufort Inlet while moving in a W-NW to NW direction. My observation point was on Bird Shoal just N of the inlet. From there, I could see that the birds were leaving the north side of Shackleford Bank and had probably been flying westward and parallel to the bank keeping it to their left (S-SW). From previous experience I knew the ocean front and sound shore of Bogue Bank to be regular migratory pathways. Therefore, when the birds reached a point just NE of Ft. Macon, I expected to see them turn toward the ocean front or continue across the dredge spoil islands NW of Ft. Macon to the south shore of Bogue Sound. Much to my surprise, the shorebirds made a slight turn to their right and headed in a north-northwesterly direction crossing the Morehead channel and keeping Radio Island on their left (Figure 1). When I last saw the shorebirds E of Radio Island, they were beginning to gain altitude as if attempting to reorient themselves. This behavior was repeated by over 50 flocks which averaged about 10 birds per flock. The flocks were spaced widely enough that the behavior of each was independent of the others.

It is interesting to speculate on the environmental cues the shorebirds were using which led to their apparent "mistake," i.e. moving directly N as well as directly away from the ocean beach and barrier islands, both of which migrating shorebirds regularly follow. The high, immense, and largely unvegetated dredge spoil islands NW of Ft. Macon and on Radio Island to the N of Ft. Macon would probably seem little different from the barrier islands the birds had been following for several miles and of which the birds had been staying to the mainland side. The Morehead channel could appear to be just another inlet. Also, the angle negotiated by the shorebirds would have been relatively slight (about 50°) and less than the angle of change they almost certainly made further E on Shackleford Bank a short time earlier.

It is very interesting that at the point where the shorebirds made their change in direction, Barn Swallows gained altitude and then turned sharply to the SW, crossing Ft. Macon and probably moving W along the ocean front.

Golden Eagle in the Unicoi Mountains

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14 October 1972

On 14 August 1972 my wife and I observed an adult Golden Eagle (*Aquila chrysaetos*) on the Tennessee-North Carolina state line at the junction of the Tellico Wildlife Management Area (Tennessee) and the Nantahala National Forest (North Carolina) in the Unicoi Mountains. When first seen the bird was gliding out of North Carolina. After traveling a short distance it turned diagonally along the crests of the mountains that mark the state line. Again, after flying a short distance the bird dropped downward into Tennessee and flew directly toward our location at Whigg Meadows, a clearing approximately 30 acres in size and located at an elevation of 4,800 feet. We did not move and the bird made several passes over the opposite side of the meadow at a height of approximately 50 yards before turning and gliding NE along the state line crests and then back into North Carolina. Atmospheric conditions were good for observations, with a partly cloudy sky and an easterly (out of North Carolina) breeze ranging in velocity from 5 to 10 mph. This is the writer's second sighting of this species in the same general area during the summer months. In early August of 1968 I observed another adult Golden Eagle approximately 10 miles W of Whigg Meadows in a small Tennessee mountain valley.

Thayer's Gull at Kill Devil Hills, N.C.

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January 1972

On 26 October 1971 I was on the porch of the Cavalier Motel at Kill Devil Hills, N.C., scoping the ocean for seabirds when four gulls landed at the water's edge directly in front of me. They were about 100 feet from me and had the mid-afternoon sun directly on them; they stood quietly, facing into the wind and resting, but with their heads out and eyes open. As I have for several years, I checked the eye and leg color somewhat automatically. Three were pink-legged, yellow-eyed orthodox adult Herring Gulls (*Larus argentatus*). The fourth – otherwise seemingly identical – had a definitely dark eye.

Because the light was perfect and the birds quiet, I was able to use the 60X Balscope lens and could see the dark iris plainly. The color, I would say, was a light walnut brown; the iris looked very like brown glass and thus the color had a somewhat transparent quality. Although the iris did not contrast strongly in color with the black pupil, I could clearly distinguish the two parts with the 60X lens. The pupils of all four birds were much contracted as they were standing in full sunlight, and this made all, or nearly all, of the width of the iris visible. The eye-ring was a dull reddish brown, close in tone to the brown iris, and very different from the bright yellow eye-ring of the Herring Gulls.

The four birds stood in a line where the breaker-foam stopped, about 3 feet apart; all four faced into the wind, but did so at a slightly different angle so that absolutely exact comparisons were not possible. After careful comparisons, I found that the four were more or less identical in size and mantle-color. Little of the wing-tip pattern can be seen when a gull is resting, but I endeavored to compare that of the dark-eyed bird with the adjacent Herring Gull and found that the amount of black on the primary tips was distinctly more limited than that of the Herring Gull. This would agree closely with example six in Figure 45 of Smith's Monograph (*Evolution of Some Arctic Gulls*, A.O.U. Monograph No. 4, 1966) and therefore is quite acceptable for a Thayer's Gull (*Larus thayeri*). Plate 32 of Godfrey's *Birds of Canada* (1966) also indicates such a wing tip pattern for Thayer's Gull.

I had no way of collecting the bird and, after some 15 minutes of observation, had to watch it fly off with its companions.

I can find no mention in any reference available to me of another species of gull having 1) a brown iris, 2) medium gray mantle, 3) flesh-pink legs, and 4) a black-white wing-tip pattern. Accordingly I submit that some years of inspecting Herring Gulls (a dull business) has finally yielded a Thayer's Gull.

[Dept. Ed. – Your editor is informed by personnel at the National Museum of Natural History that the dark eye color is diagnostic of Thayer's Gull in adult birds. No such separation is possible between immature Thayer's Gulls and Herring Gulls. On the basis of this careful study and with recognition by the American Ornithologists' Union (*Auk*, 90:411-419), Thayer's Gull can be placed on the hypothetical list for North Carolina. This is one of those species, however, which should be collected for final verification before being placed on the official list for North Carolina.]

Recovery of a Banded Eastern Bluebird: Confirmation of an Assumption

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9 July 1972

In a previous field note (*Chat*, 32:28-29) I expressed the opinion that Eastern Bluebirds (*Sialia sialis*) breeding in my wooded yard near Zebulon, Wake County, N.C., did not migrate in winter but merely dispersed along the roadsides. I based this assumption on the occasional sighting of a banded bluebird in my yard during December, January, and February, months when the species was rarely present around the nest boxes and more abundant than usual on wires along the road to town. Confirmation of my assumption comes from the recovery of an Eastern Bluebird banded at my station on 6 October 1970 as a hatching year male. The bird returned on 7 May 1971, and it was apparently one of several males using my boxes that spring. On 23 January 1972 a member of the David Pearce family found the bird dead in the yard of their home. The Pearces live in Franklin County 0.9 of a mile from my banding station, and Mr. Pearce reports that he leaves his tobacco burner doors open in winter to prevent loss of birds roosting in his barns.

BRIEFS FOR THE FILES

Compiled by Robert P. Teulings
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(All dates winter 1972-1973)

COMMON LOON: One was sighted near Winston-Salem, N.C., on 1 February by Ramona Snavely and party, an unusual mid-winter record for that inland locality. Elsewhere, as many as 13 over-wintered at Roanoke Rapids Lake, Halifax County, N.C., as reported by Merrill Lynch. An impressive concentration of over 1,000 was observed on the coast in Cape Lookout Bight off Morehead City, N.C., on 8 March by John Fussell.

RED-NECKED GREBE: One was a rare inland visitor at Roanoke Rapids Lake on 10 December, Merrill Lynch. Another was seen on the coast at Cape Hatteras, N.C., on 17 February by Gilbert Grant.

HORNED GREBE: A good inland count of 95 was recorded at Roanoke Rapids Lake, N.C., on 13 February by Merrill Lynch.

EARED GREBE: One was present 27 and 28 January at Lake Hartwell near Clemson, S.C., carefully studied by Sidney Gauthreaux. This apparently is only the second reported occurrence for the state.

WESTERN GREBE: Donald and Doris Cohrs identified an individual at Bull's Island, S.C., in Cape Romain N.W.R. on 9 March. The presence of this bird was also noted by other observers during the following week, fide Burkett Neely.

SOOTY SHEARWATER: An out-of-season individual was seen at Pea Island, N.C., on 11 March by Jay Carter.

WHITE PELICAN: A winter occurrence was recorded at Charleston, S.C., where as many as 25 were present in early January, Dennis Forsythe.

DOUBLE-CRESTED CORMORANT: A sizable wintering population of at least 2,000 roosted at Bird Shoal off Morehead City, N.C., as observed by John Fussell.

GREAT BLUE HERON: A flock of 44 migrants were counted at Roanoke Rapids Lake near Thelma, N.C., on 24 March by Merrill Lynch.

BLACK-CROWNED NIGHT HERON: An estimated 800 wintered in the Morehead City-Beaufort area according to roost censuses taken by John Fussell.

YELLOW-CROWNED NIGHT HERON: A large roost of several hundred birds was found on South Island near Charleston, S.C., on 31 December by Ted Beckett.

LEAST BITTERN: A late lingerer was seen on Bogue Banks near Atlantic Beach, N.C., on 29 December by James Parnell.

GLOSSY IBIS: One was noted in mid-winter, 26 January, at Bodie Island, N.C., by Harry LeGrand, Edmund LeGrand, Gard Otis, and Sebastian Patti. Another was seen 4 February near Morehead City by John Fussell.

WHITE IBIS: A wintering population of about 100 was reported by John Fussell in the Morehead City area. The number of adults was up sharply from last winter, providing further evidence that the species is successfully extending its year-around range northward into that locality.

CANADA GOOSE: The peak winter population at Mattamuskeet N.W.R. was only 8,000 this season, John Davis.

WHITE-FRONTED GOOSE: One wintered at Pea Island N.W.R. (Tim Wilkins and many other observers), and two wintered at Savannah N.W.R. (Sam Young, Pat Young et al.).

SNOW GOOSE: Peak winter population at Pea Island N.W.R. was estimated at nearly 10,000, Tim Wilkins.

FULVOUS TREE DUCK: One was collected at Esterville Plantation near Georgetown, S.C., on 9 January by Don Marchette, fide Sidney Gauthreaux.

BLACK DUCK: A good inland count of 175 was recorded 7 January near Winston-Salem by Royce Hough.

COMMON TEAL: An adult male was seen by many observers at Pea Island N.W.R. during the last week of December. A later sighting of possibly the same bird was recorded there on 10 February by Scott Juelfs. The Common Teal is no longer recognized by the American Ornithologists' Union as a distinct species. It is now regarded as the Eurasian race of the Green-winged Teal.

CANVASBACK: A population of 3,000 to 3,500 wintered at Mattamuskeet N.W.R. as reported by John Davis.

GREATER SCAUP: An individual was found inland at Thurlow's Lake near Vass, N.C., on 18 December by Jay Carter. Some were also noted on waterfowl censuses of lakes in the vicinity of Raleigh, where a peak count of 17 was recorded on 7 March by Bruce Bolick.

COMMON GOLDENEYE: A lone female was seen on the Yadkin River in Surry County, N.C., on 16 January by James Martin. Scattered inland sightings of a few individuals were also reported by observers at Raleigh, Winston-Salem, and Roanoke Rapids.

OLDSQUAW: One was seen at Lake Benson near Raleigh, N.C., on 17 December by Bruce Bolick.

HOODED MERGANSER: A count of 154 was recorded at Lake Wheeler near Raleigh on 9 January by Bruce Bolick, an unusual concentration for that inland locality.

COMMON MERGANSER: One was an uncommon visitor at University Lake near Chapel Hill, N.C., on 26 December (James Pullman), and 15 were found on Roanoke Rapids Lake, Halifax County, N.C., on 23 January (Merrill Lynch).

GOLDEN EAGLE: One adult was seen at Bull's Island in Cape Romain N.W.R. on 18 March by Perry Nugent.

BALD EAGLE: Two birds, an adult and an immature, wintered at Mattamuskeet N.W.R. (many observers), and three immatures were present through the season at Magnolia Gardens near Charleston (Ted Beckett).

OSPREY: Two were winter residents at Kerr Scott Reservoir in Wilkes County, N.C., well north of their expected winter range, Wendell Smith.

SANDHILL CRANE: An individual was seen near Chester, S.C., on 4 March by Chip White, fide Sidney Gauthreaux. The bird was studied at close range standing and in flight.

PIPING PLOVER: An unusually good winter count of 70 was recorded at Bird Shoal off Morehead City, N.C., on 4 February by John Fussell.

GREATER YELLOWLEGS: An inland winter occurrence was recorded in Northampton County, N.C., where a single bird was present at Occoneechee Neck on 20 and 21 January, Merrill Lynch.

DUNLIN: Impressive counts of about 2,000 at Shackleford Banks on 8 March and 3,000 at Bird Shoal off Morehead City on 11 March were reported by John Fussell.

LONG-BILLED DOWITCHER: Twelve were carefully identified at the Bodie Island lighthouse pond on 26 January by Harry LeGrand and party.

HUDSONIAN GODWIT: One was found among a flock of shorebirds at Moore's Landing, Cape Romain N.W.R., on 25 February by Perry Nugent, a rare winter record.

AMERICAN AVOCET: At least 200 were at South Island near Charleston on 31 December, Ted Beckett.

RING-BILLED GULL: An estimated 10,000 were present at the peak of the winter season at Roanoke Rapids Lake, Halifax County, N.C., Merrill Lynch.

BLACK-HEADED GULL: A single bird in immature plumage was seen at South Island, S.C., on 31 December by Ted Beckett and Stan Langston. Another was seen at Hampton Park in Charleston on 21 January by Dennis Forsythe.

LITTLE GULL: An adult and two immatures were observed on Hatteras Island at Buxton, N.C., on 10 March by James Parnell and Jay Carter.

BLACK-LEGGED KITTIWAKE: An adult, partially oiled, was observed at close range in flight and at rest on the beach at Pea Island N.W.R. on 31 December by Edmund LeGrand, Harry LeGrand, Merrill Lynch, and Ross Silcock.

LEAST TERN: A late straggler was seen at Port Royal, S.C., on 28 December by Orion Hack.

BLACK SKIMMER: A winter lingerer was noted at Pea Island N.W.R. on 26 January by Sebastian Patti, Gard Otis, Harry LeGrand, and Edmund LeGrand. Approximately 30 wintered in the Morehead City area, as reported by John Fussell.

GROUND DOVE: Four were seen at West Onslow Beach, N.C., on 23 December by Gilbert Grant. Small numbers now appear to be resident in that area.

RUBY-THROATED HUMMINGBIRD: One was present at Wrightsville Beach, N.C., as late as 8 January, Dot Earle.

WHITE-EYED VIREO: A hardy individual was seen at Harker's Island near Morehead City by Royce Hough on 22 January.

ORANGE-CROWNED WARBLER: A locally rare winter visitor was noted near Durham, N.C., on 5 February by Mrs. Paul S. Payne.

YELLOW-HEADED BLACKBIRD: Beth Dykema observed a male feeding at her terrace in Charlotte, N.C., on 16 January, fide Elizabeth Clarkson.

ROSE-BREASTED GROSBEAK: An out-of-season lingerer was seen at Oakdale Cemetery in Wilmington, N.C., on 14 January by Kitty Kosh.

BLUE GROSBEAK: One was present for several days in late January at Mrs. Richard C. Tanner's feeder in Eden, N.C., as reported by Ruth Noonan.

PAINTED BUNTING: At Morehead City, M.J. Nicholson noted a female at his feeder on 16 February, fide John Fussell.

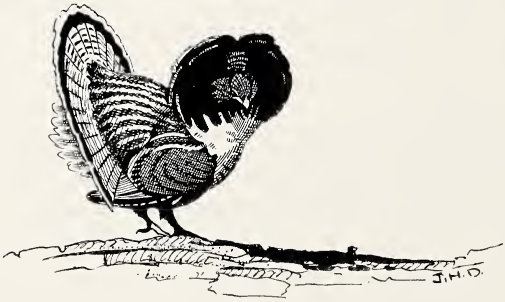
DICKCISSEL: Two were noted as regular feeder visitors through the winter season at Elizabeth City, N.C., by Frank Aycock. Elsewhere, other observers noted wintering individuals at Albemarle, N.C., Charleston, and Dillon, S.C.

TREE SPARROW: One was seen by Perry Nugent at a feeder in Charleston on 28 February, and another was seen at Chapel Hill on 19 March by William Wagner.

WHITE-CROWNED SPARROW: One was reported as a locally rare winter visitor at Charleston on 14 January, Perry Nugent. Elsewhere, White-crowneds were conspicuously common at Johnston's Farm in the Occoneechee Neck section of Northampton County, N.C., where flocks of up to 40 were seen, Merrill Lynch.

LAPLAND LONGSPUR: At least 15 were found among a large flock of Horned Larks at the Johnston Farm in the Occoneechee Neck section of Northampton County, N.C., on 20 January by John Wright and Merrill Lynch.

SNOW BUNTING: Visitors were apparently very scarce in the Carolinas this past winter. The only sighting reported was of a single bird at Charleston on 25 February (Perry Nugent).



BOOK REVIEWS

A FIELD GUIDE TO THE BIRDS OF MEXICO. – Ernest P. Edwards. Published by the author, Sweet Briar, Virginia, 1972. 300 p. Illus., 2 maps, 24 color plates. 5 3/4 x 9 inches. Heavy paper, $7.50.

A FIELD GUIDE TO THE BIRDS OF MEXICO AND CENTRAL AMERICA. – L. Irby Davis. University of Texas Press, Austin, 1972. 282 p. Illus., 48 color plates. 5 3/4 x 8 5/8 inches. Hard cloth, $10.00; flexible binding, $6.50.

Inevitably the two guides listed above will be compared with each other and with *Birds of Mexico* by Emmet R. Blake (University of Chicago Press, 1953). Absence of colored plates makes Blake's book somewhat unappealing to bird watchers long accustomed to the excellent illustrations in the Peterson and Robbins guides. Both new books on the birds of Mexico have colored plates, but neither volume appears to be the perfect solution to the immense problem of providing a first-class guide to the large number of species of birds found in that country. Although I am certainly not qualified to judge these books critically, I believe Edwards' text is superior to that provided by Davis. The illustrations by F.P. Bennett Jr., however, would be worth the cost of Davis' book to the bird student traveling in Mexico. Fortunately, Bennett's plates are printed consecutively in the center of the book where they can be located quickly for comparison with Edwards' text. This may be a rather awkward arrangement, but it is probably the best one can do until Peterson's long-awaited volume on the birds of Mexico becomes available. – EFP

BIRD WALK THROUGH THE BIBLE. – Virginia C. Holmgren. The Seabury Press, New York, 1972. 216 p. Hard cover, $6.95.

No bird watcher can read the Bible without being impressed by the frequent references to birds. Virginia Holmgren's book is an adequate and thoughtfully organized treatment of the subject, but it offers nothing of importance that is not available in several earlier works from other publishing houses. My personal preference leans toward Alice Parmelee's *All the Birds of the Bible* (Harper & Brothers, 1959), which has a large number of black-and-white illustrations and an index in addition to a carefully prepared text. However, Bible scholars may prefer Holmgren's emphasis on the Hebrew designations for birds, and those not familiar with Eurasian birds may appreciate her descriptions of those species in relationship to similar ones found in North America. Certainly the clergyman or layman who would like to improve his understanding of the natural history of Bible lands couldn't go wrong by adding one or both of these books to his library. – EFP

WORDS FOR BIRDS: A Lexicon of North American Birds with Biographical Notes. – Edward S. Gruson. Quadrangle Books, Inc., New York, 1972. 305 p. Indexed. Illus. Hard cover, $8.95.

Which bird's name is an allusion to St. Peter's walking on the water? Which bird is named for someone who falsely represented himself as having been a captain in the United States Navy? Which one is named for a man who really was a general in the Confederate Army? We've heard of Lucy's Warbler, but who was Lucy's father and which birds bear his name? Was Franklin's Gull named for Benjamin Franklin or some other Franklin?

If you have ever wondered how birds acquired their common and scientific names, you will thoroughly enjoy this book. Indexed by common, generic, and scientific names of birds as well as by the people for whom the birds are named, the book is a handy reference; but the biographical sketches are so well written that it is almost impossible to read one of them without at least scanning the book from cover to cover. – EFP

Carolina Bird Club
INC.

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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from State and Federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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All CBC members not in arrears for dues receive *The Chat,* a quarterly journal devoted to bird study and conservation, and the *CBC Newsletter,* which carries information about meetings, field trips, and club projects. Articles intended for publication in *Chat* may be sent to the Editor or to the appropriate department editor listed in a recent issue of the bulletin. Items for the *Newsletter* should be sent to its Editor, F.M. Probst, P.O. Box 396, Pawley's Island, S.C. 29585. Correspondence regarding memberships, changes of address, or requests for back numbers of either publication should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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Birds

The Chat

Bulletin of the Carolina Bird Club, Inc.

Vol. 37 **September 1973** **No. 3**

The Chat

Vol. 37 **September 1973** **No. 3**
Published by the Carolina Bird Club, Inc.

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OUR COVER—The tiny and secretive Yellow Rail is probably far more abundant as a transient and winter visitor than the few published records indicate. (Photo by James F. Parnell.)

GULL POPULATIONS AT CHARLESTON, S. C., JUNE 1971 TO JUNE 1972

DENNIS M. FORSYTHE

Although gulls are the most conspicuous birds found on the Carolina coast and Ring-billed *(Larus delawarensis)* and Herring *(L. argentatus)* Gulls were the major species contributing to the bird-aircraft strike hazard at Charleston Air Force Base (Wooten, 1971; Forsythe, 1972), little is known about population dynamics of gulls in the vicinity of Charleston, S.C. The purpose of this study was to determine the seasonal fluctuations in the species and numbers of gulls in the Charleston area.

STUDY AREA

Observations were made between 15 June 1971 and 31 May 1972 in a 500-square-mile section of coastal plain in Charleston and Dorchester Counties (Figure 1). Intensive field work was conducted in metropolitan Charleston (Figure 2). About 15% of the total area is coastal marsh and barrier island; another 40%, urban habitat; and 45% farmland, swamp, or forest. The topography is flat and almost entirely less than 30 feet above sea level.

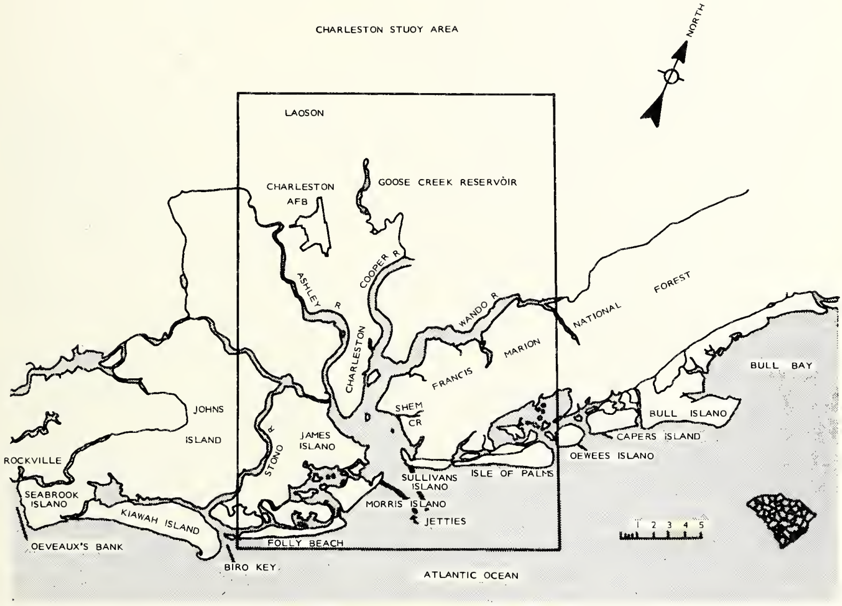
CHARLESTON STUDY AREA
NORTH
LADSON
CHARLESTON AFB
GOOSE CREEK RESERVOIR
ASHLEY R
COOPER R
CHARLESTON
WANDO R
NATIONAL FOREST
FRANCIS MARION
SHEM CR
JOHNS ISLAND
JAMES ISLAND
STONO R
ROCKVILLE
SEABROOK ISLAND
KIAWAH ISLAND
DEVEAUX'S BANK
BIRD KEY
FOLLY BEACH
MORRIS ISLAND
JETTIES
SULLIVANS ISLAND
ISLE OF PALMS
DEWEES ISLAND
CAPERS ISLAND
BULL ISLAND
BULL BAY
ATLANTIC OCEAN
1 2 3 4 5

FIG. 1 CHARLESTON GULL ECOLOGY STUDY AREA

The rectangular area is shown in greater detail in fig 2

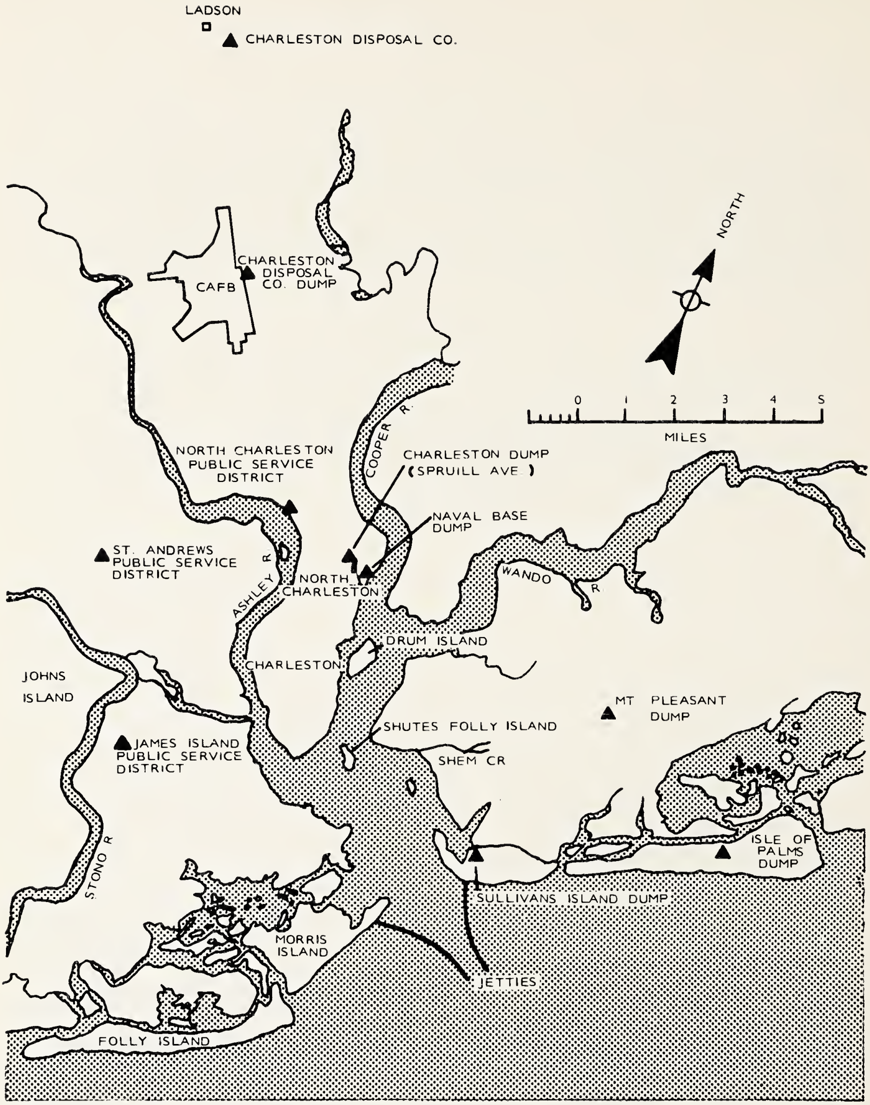
LADSON
CHARLESTON DISPOSAL CO.
NORTH
0 1 2 3 4 5
MILES
CHARLESTON DISPOSAL CO. DUMP
CAFB
COOPER R.
NORTH CHARLESTON PUBLIC SERVICE DISTRICT
CHARLESTON DUMP (SPRUILL AVE.)
NAVAL BASE DUMP
ST. ANDREWS PUBLIC SERVICE DISTRICT
ASHLEY R.
NORTH CHARLESTON
WANDO R.
DRUM ISLAND
CHARLESTON
JOHNS ISLAND
MT PLEASANT DUMP
SHUTES FOLLY ISLAND
JAMES ISLAND PUBLIC SERVICE DISTRICT
SHEM CR
STONO R.
ISLE OF PALMS DUMP
SULLIVANS ISLAND DUMP
MORRIS ISLAND
JETTIES
FOLLY ISLAND

FIG. 2 METROPOLITAN CHARLESTON AREA WITHIN WHICH MOST INTENSIVE FIELD WORK WAS CONDUCTED

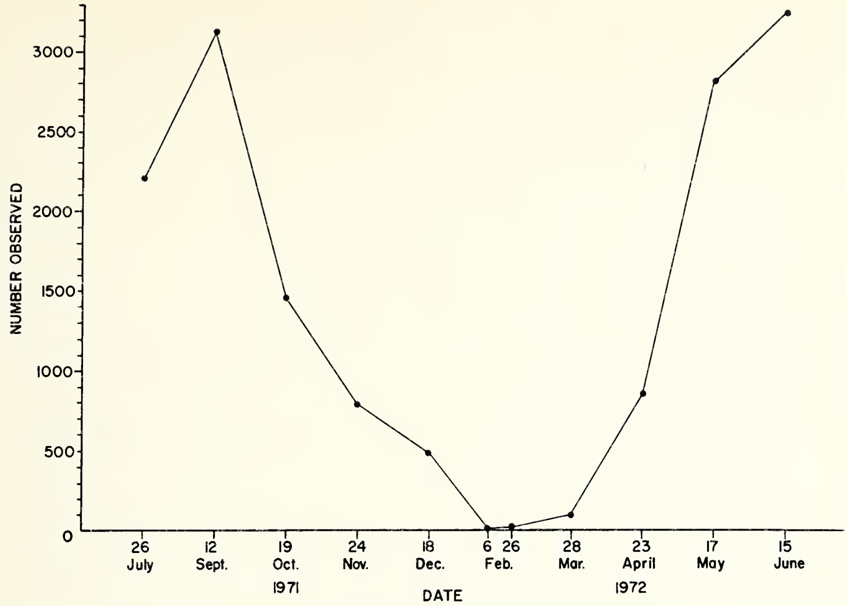

FIG. 3 NUMBER OF LAUGHING GULLS WITHIN THE CHARLESTON STUDY AREA, 1971-1972

METHODS

Ground censuses were made at least twice weekly at all gull feeding and loafing sites within metropolitan Charleston (Figure 2). Flying in a Cessna 150 Aerobat or a Cessna 172 Skyhawk, I made eight aerial censuses covering all known gull concentrations within the 500-square-mile plot between 26 July 1971 and 17 May 1972. Flights averaged four hours and were made from mid-morning through the afternoon over the same course at elevations of 500 to 800 feet. Clear weather with light winds and good visibility but variable tidal conditions occurred on all censuses. In conjunction with the aerial counts, ground observers censused all gull concentrations within the metropolitan Charleston sector. Comparisons between the two methods showed that aerial counts underestimated numbers by about 25%.

SPECIES PRESENT AND POPULATION SIZE

Seven species of gulls, Laughing *(L. atricilla)*, Herring, Ring-billed, Bonaparte's *(L. philadelphia)*, Great Black-backed *(L. marinus)*, Black-headed *(L. ridibundus)*, and Iceland *(L. glaucoides)* were found during the study. Of these, only the Laughing, Herring, Ring-billed, and Bonaparte's were common.

A summer Laughing Gull population of over 2,200 birds increased to over 3,000 in September with the addition of migrants from the northern part of its range and declined to a winter low of 5 to 10 individuals. Numbers increased again in spring, resulting in a breeding population of over 3,200 birds in late May and June (Figure 3).

From a mid-summer low of under 100 birds, Ring-billed numbers increased during October reaching a peak of over 3,600 in late November. The Ring-billed population dropped during December and January but increased again in February and March, declining again to under 100 in May to June (Figure 4). Noticeable migrations associated

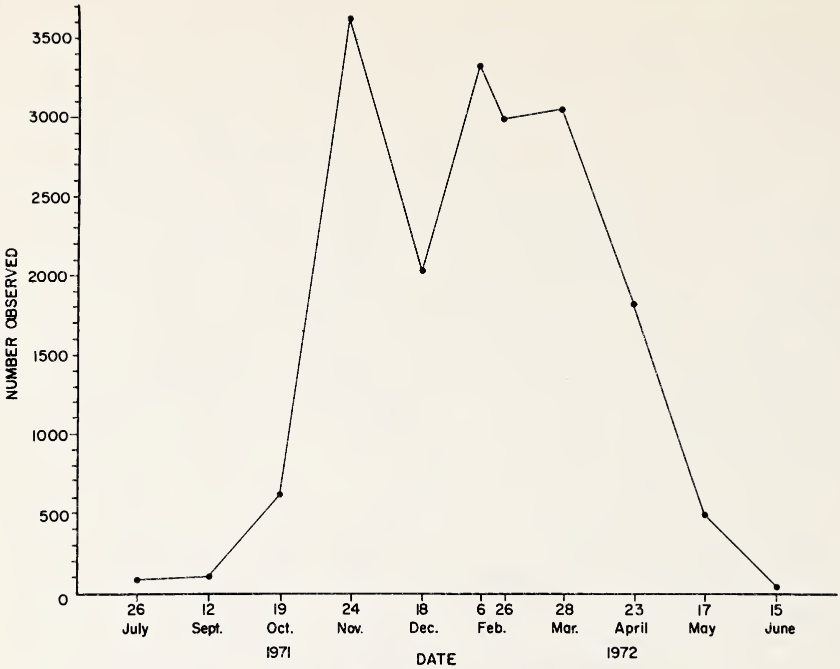

FIG. 4 NUMBER OF RING-BILLED GULLS WITHIN THE CHARLESTON STUDY AREA, 1971-1972

with high winds and rain occurred during 20 to 30 October, 22 to 29 November, and 24 to 30 March.

Ring-billed Gulls were found inland more often and in larger numbers than any other species under study. They occurred at such places as sanitary landfills, golf courses, shopping centers, and short grass fields up to 30 miles from the ocean or rivers.

Herring Gull populations (Figure 5) followed similar trends to those found for Ring-billed Gulls except that the winter population was lower and weather-induced movements were less evident. Herring Gulls were more restricted to the coast and large open dumps than were Ring-bills. Small numbers were summer residents and in the future may breed, especially in suitable locations such as the Cape Romain National Wildlife Refuge.

Bonaparte's Gulls were first seen on 24 November when 15 were found following a shrimp trawler. The peak number of about 400 occurred from late January through February, and the species was last recorded on 26 March. This highly aquatic gull was found on sewage lagoons, estuaries, fresh water ponds, and other bodies of water.

Since 1954, one to three Great Black-backed Gulls have been reported each winter in the Charleston area (Sprunt and Chamberlain, 1970) and the species appears to be increasing (Potter, 1972). Black-backs were seen from 3 January through 5 April with the peak population of 20 in February. Individuals were seen on barrier island beaches, Charleston Naval Base dump, and the Isle of Palms dump.

An immature Iceland Gull associated with Ring-billed Gulls and Herring Gulls was seen near the Carolina Yacht Club in late December or early January by E. Milby

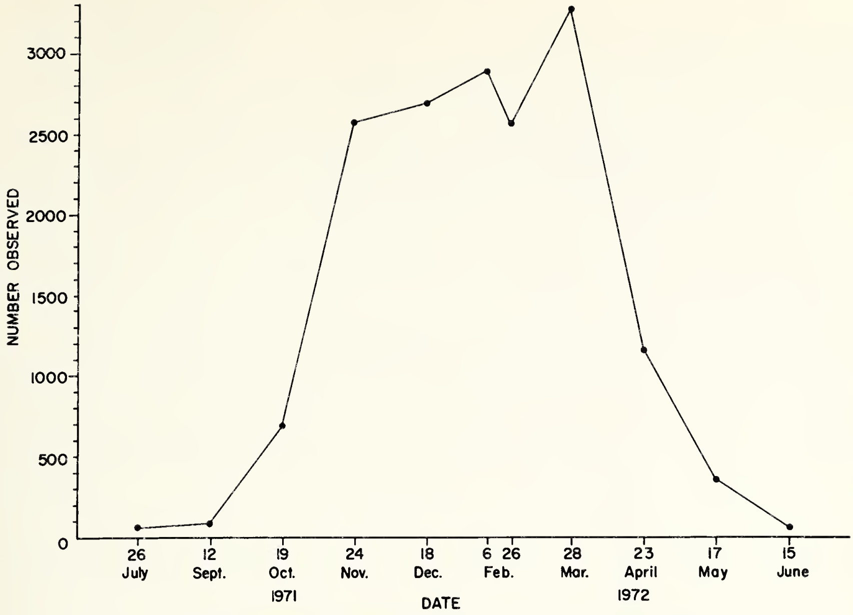

FIG. 5 NUMBER OF HERRING GULLS WITHIN THE CHARLESTON STUDY AREA, 1971-1972

Burton. This was only the second South Carolina record (Sprunt and Chamberlain, 1970).

Dick Viet and Peter Polslek observed two adult Black-headed Gulls, one in breeding plumage and one in winter plumage, feeding with a flock of Bonaparte's Gulls on the Charleston waterfront on 25 March (Teulings, 1972; LeGrand, 1972). This was the second South Carolina record (Probst, 1971).

SUMMARY

Gull populations were measured in the Charleston area by aerial and ground counts from 15 June 1971 to 31 May 1972. Seven species were found but only four were common. About 2,200 Laughing Gulls were summer residents, but over 3,000 were present during fall migration. About 3,600 Ring-billed Gulls wintered in the area, and slightly lower numbers of Herring Gulls were found during the same period. Bonaparte's Gulls were present during November through March with about 400 during February. Great Black-backed Gulls were present from early January to early April with a peak of 20 in February.

ACKNOWLEDGMENTS

I am grateful to S.A. Coleman, K.A. Dodds, M. Hughes, and D. Reid for help in the field. J. Hart and The Citadel Flying Club provided pilots for the aerial censuses. This study was financed by Contract No. 14-16-0008-612 from the Department of the Interior with funds provided by the Eco Systems Technology Section, Department of the Air Force, and a Citadel Development Foundation advance study grant.

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Department of Biology, The Citadel, Charleston, S. C. 29409, 4 September 1972.

SPRING BIRD COUNT OBSERVERS

(Continued from Page 77)

CALDWELL COUNTY, N.C.: Mrs. Glen Barnes, Mrs. Clarence Beach, Isabel Bernhardt, Mrs. Murray Bruner, Barbara Craig, Mrs. Jack Davis, Margaret Harper, Mr. and Mrs. Garvin Hughes, Mr. and Mrs. E.M. Manchester, Mr. and Mrs. Fred May, Helen Myers, Mrs. C.S. Warren, Joyce Whitman.

AVERY COUNTY, N.C.: Cecilia Burleson, Charlie Burleson, Winston Church, Judy Clement, Nat Clement, Brett Day, Hugh Fields, Evelyn Gordon, Dot Griffin, Mary Alice Hardin, Dixie Proctor, Betsy Randall, Frank Randall, Sally Southerland, Neil Stewart, Kay Webb, Stewart Webb.

YANCEY-McDOWELL COUNTIES, N.C.: Robert Bruce, Dennis Carter, John Hall, Joseph L. Hall, Walter Hall,Doris Sargent, Roland Sargent.

BUNCOMBE COUNTY, N.C.: Robert Brown, Dennis Carter, Fred Cline, Nora Cline, Margaret Finch, Dorothy Griffin, Joseph Hall, Joy Hall, Joyce Hall, Mark Hall, Walter Hall, Florence Heineman, Herbert Heineman, William Jervey, Loretta Kincaid, Gordon Mahy, Mr. and Mrs. S.M. Rauchwerger, Betty Ruiz, Robert Ruiz, Chris Rustay, Gladys Rustay, Wendy Rustay, Doris Sargent, Roland Sargent, Mary Sawyer, Thomas Wood, Vertice Wood.

BREVARD, N.C.: Glenna Ball, Herbert Ball, Bill Cook, Ellen Cook, Bill Cunningham, Janet Cunningham, Louise Davidson, Eloise Fenneberg, Connie Foster, Ercel Francis, George Francis, Dick Garren, Helen Hardin, Curt Holland, Gail Holland, Susan Holland, Walter Holland, Bernice Hollifield, Hugh Hollifield, Grace Jackson, Sue Marcum, Walter McKelvey, Dewitt Parsons, Helen Parsons, Mr. and Mrs. Donald Reese, Hazel Roberts, Hervey Roberts, Kenneth Roberts, Mary Roberts, Becky Swanson, Phyllis Tish, Claude Viens, Eleanor Viens, Doug Wauchope, Harold Zimmerman, Helen Zimmerman.

CBC Roundtable

New Department Editor

Last spring Louis C. Fink and his wife, Vera, moved to North Carolina to be near their grandchildren, and Georgia's loss became CBC's gain. Formerly associated with Trust Company of Georgia, Lou now devotes his time to writing, editing, and public speaking engagements, including illustrated talks on native birds. Having been an active member of Georgia Ornithological Society for 20 years, Lou promptly offered his services to CBC. It is our pleasure to welcome him as the new editor of "CBC Roundtable." His address is Apt. 6, Building L, Tau Valley Estates, Rocky Mount, N.C. 27801.

Collector's Print Available

Richard A. Parks' print of the Brown Thrasher and Cherokee Roses is being offered to people who join National Audubon Society. For details, write Wm. H. Marsh Jr., Treasurer, Atlanta Audubon Society, 3974 Powers Ferry Road, N.W., Atlanta, Georgia 30342.

Mt. Mitchell Bird List

"Annotated Checklist of the Birds of Mt. Mitchell State Park, North Carolina" by Marcus B. Simpson Jr. appears in the Winter 1972 issue of *The Journal of the Elisha Mitchell Scientific Society.* Dr. Simpson's paper lists 91 species and contains few surprises for those who have read his articles in *Chat* on the birds of the southern Appalachian Mountains, but his comments on several species should be kept in mind by CBC members visiting the Black Mountains. Simpson regards the Black-capped Chickadee as apparently having been "extirpated due to habitat disruption," the last acceptable record being a pair seen by Burleigh at 6,000 feet on 8 May 1930. Although the Pine Siskin has been found in the Black Mountains during every month of the year, Simpson found no evidence of breeding. From December through June the Red Crossbill is "highly irregular and generally rare or absent within the Park." Simpson found no evidence of breeding. Conspicuous by their absence are such species as the Great Horned Owl, Least Flycatcher, and Scarlet Tanager. Their apparent absence from the Park (elevation 5,600 to 6,684 feet)may be the result of altitudinal limitation, lack of suitable habitat, or insufficient field work in the less accessible portions of the area covered. Perhaps Simpson's paper will encourage casual birders in the Black Mountains to report sightings of transients and common mountain species whose presence above 5,600 feet seems unusual only to those intimately familiar with high altitude bird records.

Comments on Biblical Bird Names

Mrs. Potter's review of Holmgren's "Bird Walk Through the Bible" raises some curious questions. In A. Landsborough Thomson's "A New Dictionary of Birds" (1964) Dr. Aharon Shulov, Director of the Jerusalem Biblical Zoological Garden, gives a list of the birds of the Old Testament. He points out that in quite a few cases, we do not actually know what birds were originally meant by the designations in the Hebrew text. The situation is even worse for the mammals. The bird names are now given the meanings that are used in Hebrew as spoken today in Israel. Part of the problem comes from the fact that Hebrew was not a vernacular language for nearly 1700 years following 200 A.D. It was simply a liturgical language persisting in more than one form and influenced to some extent by the environments in which Jews lived. Further, there was no natural history literature in Hebrew from the classical period. To make matters worse the present Hebrew (Masoretic text) was not canonized until about the year 900 A.D. How far it departs from any original Biblical text is, of course, uncertain.

The birds of the New Testament must depend largely on the meaning of Greek bird names. Here we have a longer continuous, but perhaps not wholly unaltered, tradition. Greek remained a vernacular. In addition, we have the zoological works of Aristotle with some descriptions written a little earlier than 300 B.C. Anyone interested might look up Sir D'Arcy W. Thompson's "A Glossary of Greek Birds." – CHARLES H. BLAKE, Box 613, Hillsborough, N. C. 27278.

Color Banding of Painted Buntings

Although we live close to the northern limit of the range of the Painted Bunting we have banded 28 birds between 22 April and 10 August, 1973: 7 definitive males, 6 green breeding males, 6 breeding females, and 9 hatching year birds of unknown sex. We are undertaking a study of this delightful species because the literature is sparse and contradictory. To that end we have color banded all but three of the banded birds, as shown in the table, and thus are able to identify as individuals the birds that come to our feeders and bathe and sing in the area, as well as those that repeat in the nets and traps. We are asking southern banders to be on the lookout for the color banded birds, especially the green males. We wonder when the males acquire definitive plumage. Of course, we hope to get a big return next spring; but even if the birds don't come to our area, perhaps they will be observed elsewhere and some observers will write to tell us the state of their plumage. We welcome information of any kind about this species. – Samuel R. and Isabel H. Tipton, Star Route No. 2, Box 780, Southport, N.C. 28461.

PAINTED BUNTINGS BANDED 1973
(Aluminum Band Prefix 820-)

Definitive Males		Green Males		Females		Hatching Year	
07805	White	07813	Red	07809	Light Pink	07814	Yellow
07	Orange	15	Light green	10	Orange	24	Yellow
18	Mauve	16	Dark green	17	Light blue	31	Yellow
23	Black	19	Dark blue	20	Mauve	33	Yellow
30	Light blue	21	Dark pink	25	White	34	Yellow
		28	Light blue (right leg)			35	Yellow
						36	Yellow
						37	Yellow
						38	Yellow

Color bands on left leg except 0728

Green birds categorized on basis of:

Skull ossification	Cloacal protuberance
Brood patch	Wing length

Conservation

. . . with Marie Mellinger

An Unsporting Sport

When this was a pioneer country, hunting and trapping were essential, for a man's family was often dependent on his prowess with a trap or a gun. Now the sport of hunting has become a big business, and in many instances can hardly be called a sport. All the odds are on the side of man, and the birds and animals seldom have even a "sporting chance." We find no fault with the individual who goes out into the woods, carefully obeying all the laws, and kills his bird or animal, if kill he must. But we do have a lot more respect for those parents who teach their children to hunt with their eyes, or a camera, instead of a gun.

Far too much hunting has degenerated into a barnyard type of slaughter, where almost-tame animals are driven directly to the hunters, or penned up in small areas where they have no chance at all to escape. The description of the buffalo hunt on pages 117-120 of *Bless the Beasts and Children* is more truth than fiction. The same scene occurs over and over, all too often on so called "refuges" where the excuse is that "there are too many animals for the food supply" – in itself an indictment of our vanishing wildlife habitat. If there are too many birds or animals in one area, why can't some be moved, under tranquilizers if necessary, to areas already decimated of all wildlife? And why should our refuges raise tame birds to be turned loose, all too trustful of man, to immediately be shot?

Twenty-five years ago Aldo Leopold wrote, "Take a look at any duck marsh. A cordon of parked cars surrounds it. Crouched on each point of its reedy margin is some pillar of society, automatic ready, trigger finger itching to break, if need be, every law of commonwealth or commonweal to kill a duck. That he is already overfed in no way dampens his avidity for gathering his meat from God." Have you seen any wildlife today? How many of you listen to the pleas of the American Wildlife Federation?

Most appalling, eight out of ten hunters do not even eat their game. The kill is the thing, and after deer season the garbage trucks haul away the remains. Many men, and women, suffer from what a leading psychologist calls "trophy obsession," getting the largest of a species, or unfortunately the most rare.

There should also be growing concern over hunting and trapping methods. Recent studies by Dr. Lars Karsted of Canada, have shown that "three million waterfowl are tortured and destroyed every year by swallowing hundreds of tons of lead shot in their shallow marsh feeding grounds." How many hunters could eat a lead-poisoned duck? This problem could be solved by use of lead-free shot.

After a recent article on trapping, the Atlanta *Constitution* was deluged with letters protesting the use of steel traps. William Lanier wrote, "Soon there will be no playful otters, no beavers, no foxes, no bobcats, for our children to inherit. For every animal reported there are probably 10 or 20 that are never recorded. As for the traps being merciful, assuring a 'quick drowning,' let's try them on the trapper." Florida has banned all but live cage traps. Why can't her neighboring states follow her humane lead?

Man must be made to see the importance of the so-called animal predators to society. Kill the fox and the rabbits overrun the land; kill the rattlesnake and the rats flourish. Left alone, nature reaches her own balance.

(Continued on Page 84)

SPRING BIRD COUNT 1973		COAST			COASTAL PLAIN					PIEDMONT												MTN.			
	Total Individuals	Morehead City, N.C. 28 April	Wilmington, N.C. 23 April	Charleston, S.C. 29 April	Beaufort Co., N.C. 6 May	Pamlico Co., N.C. 29 April	Southern Pines, N.C. 28 April	Fayetteville, N.C. 28 April	Dillon, S.C. 1 May	Roanoke Rapids, N.C. 6 May	Henderson, N.C. 4 May	Raleigh, N.C. 28 April	Chapel Hill, N.C. 6 May	Greensboro, N.C. 28 April	Winston-Salem, N.C. 5 May	Iredell Co., N.C. 13 May	Stanly Co., N.C. 28 April	Charlotte, N.C. 5 May	Greenville, S.C. 5 May	Elkin-Ronda, N.C. 12 May	Caldwell Co., N.C. 30 April	Avery Co., N.C. 28 April	Yancey-McDowell Co., N.C. 28 April	Buncombe Co., N.C. 12 May	Brevard, N.C. 5 May
Common Loon	66	20	41	1	----	----	1	----	----	*	----	*	----	1	----	----	----	----	----	----	----	----	----	2	----
Red-throated Loon	4	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Horned Grebe	3	2	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pied-billed Grebe	12	----	6	1	----	----	1	----	*	1	----	----	----	----	----	----	----	----	----	----	----	----	3	----	----
Brown Pelican	118	4	8	106	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Gannet	17	17	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Double-cr. Cormorant	438	87	239	67	13	13	1	----	----	18	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Anhinga	25	----	9	16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Great Blue Heron	97	13	36	12	1	----	1	1	*	7	----	15	1	2	1	2	2	----	----	1	----	----	2	----	----
Green Heron	132	7	28	15	7	3	2	2	5	6	----	14	7	2	2	1	15	2	2	1	----	----	3	7	1
Little Blue Heron	169	91	20	22	36	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cattle Egret	332	206	29	39	38	19	----	1	----	*	----	*	----	----	----	----	*	----	----	----	----	----	----	----	----
Great Egret	193	79	96	12	----	----	----	----	----	3	----	2	----	----	----	----	1	----	----	----	----	----	----	----	----
Snowy Egret	130	66	52	12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Louisiana Heron	90	47	20	23	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Black-cr. Night Heron	21	17	----	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Yellow-cr. Night Heron	3	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----
Least Bittern	10	2	5	----	----	----	----	----	----	3	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----
American Bittern	11	----	7	2	----	----	1	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----
Glossy Ibis	243	211	29	3	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
White Ibis	165	3	18	144	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Canada Goose	110	----	4	----	22	----	----	----	----	13	----	----	----	13	54	*	----	4	----	----	----	----	----	----	----
Mallard	289	21	10	----	17	----	7	7	----	8	----	18	3	39	36	*	22	11	----	----	----	4	65	19	2
Black Duck	21	8	----	----	----	1	----	----	----	1	----	*	----	1	3	----	2	----	5	----	----	----	----	----	----
Pintail	10	8	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Green-winged Teal	8	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----
Blue-winged Teal	131	72	5	13	----	----	----	----	----	5	----	12	----	3	1	----	14	----	----	----	----	----	6	----	----
American Wigeon	4	2	----	----	----	----	----	----	----	----	----	2	----	----	----	*	----	----	----	----	----	----	----	----	----
Northern Shoveler	6	6	----	----	----	----	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Wood Duck	161	7	12	7	3	7	14	5	2	11	----	19	13	4	1	*	10	19	----	----	----	----	10	----	17
Redhead	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----
Ring-necked Duck	6	3	1	1	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	*	----	----
Greater Scaup	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Lesser Scaup	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----
Bufflehead	9	2	----	----	----	----	----	----	----	----	----	----	----	----	----	*	----	----	----	----	----	----	7	----	----
Surf Scoter	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Scoter (sp.?)	7	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ruddy Duck	10	1	----	----	----	----	----	----	----	----	----	9	----	----	----	----	----	----	----	----	----	----	*	----	----
Hooded Merganser	*	----	----	----	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Common Merganser	2	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----	----
Red-breasted Merganser	41	12	23	----	----	----	----	----	----	*	----	----	----	6	----	----	----	----	----	----	----	----	----	----	----

Turkey Vulture	227	2	19	22	3	----	3	3	----	28	3	3	14	10	7	13	43	1	1	----	----	----	26	12	14
Black Vulture	93	1	1	25	----	----	7	----	----	44	----	3	*	2	1	3	5	----	1	----	----	----	----	----	----
Swallow-tailed Kite	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Mississippi Kite	1	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sharp-shinned Hawk	7	----	----	----	----	----	1	----	----	----	----	----	2	1	----	----	1	----	----	----	----	----	----	1	1
Cooper's Hawk	9	----	1	3	----	----	1	----	----	----	----	----	----	3	----	----	----	----	----	----	----	----	1	----	----
Red-tailed Hawk	122	2	6	9	3	----	6	1	*	9	1	19	7	19	8	4	13	6	----	2	----	1	3	2	1
Red-shouldered Hawk	55	3	4	6	----	3	2	3	----	8	2	3	3	8	----	2	2	3	----	----	----	1	----	----	2
Broad-winged Hawk	32	----	----	2	----	----	----	----	1	*	----	----	*	2	2	3	2	2	----	----	3	1	11	----	3
Bald Eagle	1	----	----	1	----	----	----	----	----	*	----	----	----	----	----	----	*	----	----	----	----	----	----	----	----
Marsh Hawk	7	1	----	1	----	----	----	----	----	----	----	----	----	----	----	2	3	----	----	----	----	----	----	----	----
Osprey	117	17	42	6	3	6	3	----	*	2	1	4	*	17	*	*	13	----	----	----	----	1	1	1	----
Peregrine Falcon	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	*
American Kestrel	21	----	1	1	----	----	----	----	----	----	----	3	1	5	3	1	1	----	----	----	----	----	1	3	1
Ruffed Grouse	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	1	----	4
Bobwhite	786	23	40	21	53	23	11	16	33	77	26	59	89	36	86	18	52	30	3	32	11	----	19	14	14
Turkey	10	*	----	1	----	----	----	----	----	9	----	----	----	----	----	----	----	----	----	----	----	----	*	----	----
King Rail	5	1	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Clapper Rail	76	24	43	9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Virginia Rail	6	----	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----
Sora	16	3	9	1	----	----	1	----	----	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Rail (sp.?)	20	20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Purple Gallinule	*	----	----	----	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Common Gallinule	15	----	4	11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
American Coot	239	14	14	150	14	----	----	1	----	*	----	33	*	1	2	----	5	----	----	----	----	----	5	*	----
American Oystercatcher	180	58	106	16	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Semipalmated Plover	317	211	70	34	----	----	----	----	----	*	----	----	2	----	----	----	----	----	----	----	----	----	----	----	----
Piping Plover	8	8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Wilson's Plover	39	9	24	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Killdeer	154	1	4	----	----	1	5	2	----	5	----	11	2	18	10	20	56	8	3	1	----	1	2	2	2
Black-bellied Plover	148	59	79	10	----	----	----	----	----	*	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----
Ruddy Turnstone	43	41	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
American Woodcock	21	2	1	----	----	4	1	----	----	2	----	3	4	----	1	1	2	----	----	----	----	----	----	----	----
Common Snipe	38	1	6	3	----	----	2	2	----	4	----	3	1	----	2	----	12	----	----	----	----	----	2	----	----
Whimbrel	125	52	64	9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Upland Sandpiper	1	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----
Spotted Sandpiper	318	15	1	17	11	20	32	4	4	22	4	100	1	16	14	6	24	6	----	2	----	1	8	7	3
Solitary Sandpiper	123	7	1	4	1	3	3	----	----	6	2	43	10	2	5	1	4	14	1	1	----	----	12	2	1
Willet	462	138	275	49	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Greater Yellowlegs	87	29	26	2	----	3	*	----	----	1	----	20	----	1	2	1	----	----	----	----	----	----	----	2	----
Lesser Yellowlegs	150	81	8	----	----	1	----	----	6	8	----	23	----	5	*	----	----	1	12	5	----	----	----	----	----
Red Knot	18	15	----	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Purple Sandpiper	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pectoral Sandpiper	12	9	----	----	----	3	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----
White-rumped Sandpiper	1	*	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Least Sandpiper	196	109	9	----	1	4	----	----	----	54	----	13	----	----	----	2	2	1	----	----	1	----	----	----	----
Dunlin	1324	1040	183	101	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Short-billed Dowitcher	1264	327	837	100	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Long-billed Dowitcher	8	8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Stilt Sandpiper	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----
Semipalmated Sandpiper	129	103	22	4	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Western Sandpiper	52	18	34	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Marbled Godwit	41	2	39	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sanderling	276	91	177	8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

SPRING BIRD COUNT 1973		COAST			COASTAL PLAIN					PIEDMONT												MTN.			
	Total Individuals	Morehead City, N.C. 28 April	Wilmington, N.C. 23 April	Charleston, S.C. 29 April	Beaufort Co., N.C. 6 May	Pamlico Co., N.C. 29 April	Southern Pines, N.C. 28 April	Fayetteville, N.C. 28 April	Dillon, S.C. 1 May	Roanoke Rapids, N.C. 6 May	Henderson, N.C. 4 May	Raleigh, N.C. 28 April	Chapel Hill, N.C. 6 May	Greensboro, N.C. 28 April	Winston-Salem, N.C. 5 May	Iredell Co., N.C. 13 May	Stanly Co., N.C. 28 April	Charlotte, N.C. 5 May	Greenville, S.C. 5 May	Elkin-Ronda, N.C. 12 May	Caldwell Co., N.C. 30 April	Avery Co., N.C. 28 April	Yancey-McDowell Co., N.C. 28 April	Buncombe Co., N.C. 12 May	Brevard, N.C. 5 May
"Peep" sandpiper	150	150	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Black-necked Stilt	10	*	----	10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Great Black-backed Gull	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Herring Gull	1187	652	485	17	15	----	----	----	----	8	----	*	----	----	----	----	10	----	----	----	----	----	----	----	----
Ring-billed Gull	1327	260	407	46	21	31	----	----	----	241	163	*	----	50	1	*	107	----	----	----	----	----	----	----	----
Laughing Gull	2248	1655	260	144	73	115	----	----	----	1	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Bonaparte's Gull	20	3	----	----	----	----	----	----	----	9	3	1	----	4	----	----	----	----	----	----	----	----	----	----	----
Gull-billed Tern	92	39	47	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Forster's Tern	21	4	15	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Common Tern	259	229	22	2	----	----	5	----	----	*	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----
Least Tern	344	120	208	4	12	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Royal Tern	336	160	146	12	9	9	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sandwich Tern	14	14	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Caspian Tern	34	7	7	1	----	----	----	----	----	*	----	----	----	16	----	*	3	----	----	----	----	----	----	----	----
Black Tern	*	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Black Skimmer	829	364	462	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ringed Turtle Dove	2	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----
Rock Dove	853	19	168	----	24	----	1	----	7	18	19	217	9	188	39	8	36	40	4	6	29	----	----	17	4
Mourning Dove	2526	33	130	48	82	14	60	58	60	232	32	494	135	207	371	26	129	109	3	35	52	----	12	118	86
Ground Dove	8	2	4	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----	----
Yellow-billed Cuckoo	87	3	3	30	7	1	----	----	----	7	1	*	5	1	3	3	2	7	----	1	----	----	1	7	5
Black-billed Cuckoo	9	----	----	----	----	----	----	----	----	*	2	----	----	----	2	2	----	1	----	----	1	----	----	1	----
Barn Owl	10	----	----	----	----	----	----	----	----	----	----	----	----	6	1	----	----	----	----	3	----	----	----	----	----
Screech Owl	20	2	1	1	----	2	----	----	----	3	----	1	----	----	6	----	1	----	----	3	----	----	----	*	----
Great Horned Owl	18	1	5	----	----	*	----	----	----	4	----	1	3	----	2	----	2	----	----	----	----	----	----	----	----
Barred Owl	48	6	2	8	1	----	1	----	----	13	----	2	7	----	----	1	2	1	----	----	----	----	----	1	3
Chuck-will's-widow	55	9	13	11	----	6	1	3	----	8	----	*	----	1	1	----	2	----	----	----	----	----	----	----	----
Whip-poor-will	97	----	1	----	----	----	6	----	----	23	4	9	30	----	2	5	1	----	----	1	1	----	*	8	6
Common Nighthawk	48	7	2	2	1	----	6	1	*	5	----	1	5	1	8	5	----	1	1	----	2	----	*	----	----
Chimney Swift	1738	35	31	40	31	23	49	15	8	144	13	522	30	315	143	75	98	27	3	10	24	----	27	58	17
Ruby-th. Hummingbird	148	1	1	22	4	2	5	2	----	9	----	5	21	3	3	2	8	4	2	3	6	----	6	12	27
Belted Kingfisher	115	4	8	12	2	1	6	3	2	2	----	6	9	12	3	10	12	1	1	1	3	----	10	5	2
Common Flicker	618	18	71	7	17	5	9	15	*	19	16	48	45	106	59	13	40	13	7	10	15	15	14	24	32
Pileated Woodpecker	161	5	4	44	4	4	8	1	4	28	----	1	9	----	1	5	4	----	1	1	6	2	6	8	15
Red-bellied Woodpecker	598	12	30	56	14	5	21	7	13	48	16	79	55	76	59	12	34	20	5	9	9	----	2	12	4
Red-headed Woodpecker	130	8	31	14	33	2	2	----	----	3	2	9	3	4	3	4	5	3	1	----	----	----	1	*	2
Yellow-bellied Sapsucker	23	----	----	----	----	----	----	----	----	----	----	----	1	1	4	1	9	----	----	1	----	----	3	2	1
Hairy Woodpecker	73	3	1	3	2	2	5	----	2	8	----	3	11	3	5	5	2	----	2	3	----	2	2	3	6
Downy Woodpecker	331	5	5	6	8	4	8	5	7	28	4	22	29	41	20	3	20	9	2	8	8	12	20	36	21
Red-cockaded Woodpecker	15	2	3	3	3	----	3	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Eastern Kingbird	423	16	16	27	50	18	15	5	12	58	11	69	12	10	16	17	32	11	3	7	1	----	2	9	6

Great Crested Flycatcher	410	21	21	106	42	23	7	9	7	47	12	12	11	12	26	9	6	7	2	4	1	----	1	17	7
Eastern Phoebe	201	----	----	1	----	----	2	----	*	3	8	9	15	17	16	17	13	5	1	6	6	4	27	21	30
Yellow-bellied Flycatcher	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----
Acadian Flycatcher	182	6	2	17	2	----	1	1	1	43	----	5	42	----	11	5	1	12	----	2	----	----	10	20	1
Traill's Flycatcher	2	----	----	----	----	----	----	----	----	----	----	*	----	----	----	----	1	----	----	----	----	----	----	1	----
Least Flycatcher	6	----	----	1	----	----	----	----	----	----	----	----	----	----	1	1	1	----	----	----	2	----	----	----	----
Eastern Wood Pewee	183	4	----	33	11	6	1	8	----	3	6	1	15	1	10	18	5	5	2	4	5	----	*	40	5
Olive-sided Flycatcher	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----
Horned Lark	23	----	----	----	----	----	2	----	----	7	----	----	----	7	1	6	----	----	----	----	----	----	----	----	----
Tree Swallow	2130	21	87	129	28	93	28	----	----	4	----	513	4	1142	4	8	9	----	----	----	----	----	60	----	----
Bank Swallow	206	----	----	----	----	----	2	----	*	16	----	108	----	52	----	----	----	4	----	----	6	8	----	----	10
Rough-winged Swallow	838	13	32	7	6	----	13	6	9	18	6	27	9	93	28	14	54	2	2	10	5	----	380	75	29
Barn Swallow	2669	110	112	95	140	119	29	6	*	197	36	199	47	436	26	54	173	17	6	3	16	10	704	68	66
Cliff Swallow	152	----	----	----	----	----	2	----	----	*	----	1	----	95	3	----	48	1	----	----	----	----	----	----	2
Purple Martin	930	42	92	14	102	33	20	24	2	4	7	27	21	88	79	30	287	2	14	31	1	----	7	3	----
Blue Jay	2745	63	163	222	101	18	46	55	54	70	74	189	137	388	146	76	249	56	15	24	54	40	68	118	319
Common Raven	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3	*	3	----
Common Crow	1207	28	18	68	5	9	2	12	12	35	17	62	80	168	74	55	116	25	3	34	6	56	74	128	120
Fish Crow	273	29	69	21	66	5	10	----	----	53	----	20	----	----	----	----	----	----	----	----	----	----	----	----	----
Carolina Chickadee	1132	29	28	90	23	*	13	7	2	83	32	84	85	111	82	22	111	21	4	13	27	38	44	113	70
Tufted Titmouse	1162	12	39	126	31	12	20	10	5	61	10	96	60	84	68	28	94	28	5	17	27	46	63	122	98
White-breasted Nuthatch	208	----	----	7	3	----	4	----	1	6	----	5	14	31	19	3	8	----	----	4	3	18	12	37	33
Red-breasted Nuthatch	33	2	----	4	----	----	6	3	----	----	----	4	----	4	1	----	1	----	1	1	----	3	*	1	2
Brown-headed Nuthatch	292	10	20	83	3	2	10	17	6	21	6	17	18	27	11	5	25	5	3	3	----	----	----	----	----
Brown Creeper	9	----	----	2	----	----	----	----	----	----	----	1	1	----	----	----	3	----	----	----	----	----	1	1	----
House Wren	141	----	3	----	----	----	3	----	----	2	17	24	4	13	9	13	15	5	----	4	15	----	7	5	2
Winter Wren	14	----	----	----	----	----	----	----	----	----	----	2	*	----	----	----	----	----	----	----	----	----	6	6	----
Bewick's Wren	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----
Carolina Wren	947	30	88	112	23	7	10	17	10	68	15	109	62	69	44	18	76	22	2	12	9	3	41	63	37
Long-billed Marsh Wren	47	4	24	18	----	----	----	----	----	*	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----
Short-billed Marsh Wren	20	4	16	----	----	----	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----
Mockingbird	1463	34	144	51	49	9	21	30	48	65	54	140	76	217	191	46	160	41	6	7	22	1	14	29	8
Gray Catbird	625	6	26	24	13	3	13	13	4	53	21	61	39	39	82	29	27	21	5	17	11	6	10	85	17
Brown Thrasher	727	19	43	32	45	3	27	21	14	46	33	69	32	87	31	18	80	17	9	9	16	3	19	27	27
American Robin	2699	4	49	1	31	4	71	65	64	27	108	504	113	398	262	84	232	65	10	25	67	163	110	93	149
Wood Thrush	879	1	25	11	22	8	10	7	12	127	26	99	117	78	98	20	33	13	4	10	14	7	20	87	30
Hermit Thrush	10	----	1	4	1	----	1	----	----	----	----	----	----	1	1	*	----	----	----	----	----	----	----	1	*
Swainson's Thrush	71	----	----	----	----	----	2	----	----	1	----	6	7	5	29	6	----	3	1	1	----	----	*	10	----
Gray-cheeked Thrush	14	----	----	----	----	----	2	----	----	----	----	3	----	----	2	5	----	1	----	----	----	----	1	*	----
Veery	47	----	----	1	----	----	3	----	----	6	4	20	3	----	3	*	----	1	----	----	1	----	*	5	----
Eastern Bluebird	455	2	2	6	7	4	33	1	----	20	----	12	79	27	19	21	105	11	10	9	17	4	8	30	28
Blue-gray Gnatcatcher	557	8	29	88	4	1	25	1	8	48	4	67	67	21	46	6	9	15	----	4	----	1	74	29	2
Golden-crowned Kinglet	6	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	1	3	1	----
Ruby-crowned Kinglet	131	----	2	12	----	----	5	2	----	----	----	9	----	15	27	----	9	1	----	----	----	----	4	41	4
Water Pipit	25	----	----	----	----	----	----	----	----	17	----	*	----	----	----	----	8	----	----	----	----	----	----	----	----
Cedar Waxwing	671	46	32	----	----	----	20	15	----	3	7	142	*	248	64	60	12	----	----	----	----	----	4	18	*
Loggerhead Shrike	104	1	3	2	----	1	11	3	1	1	5	15	4	8	5	18	12	8	2	----	1	----	2	1	----
Starling	6051	210	435	35	210	165	64	32	79	285	129	549	108	1892	385	148	381	340	20	41	48	110	99	250	36
White-eyed Vireo	460	31	40	151	11	18	10	----	2	54	5	30	49	4	10	3	2	4	1	2	1	----	21	5	6
Yellow-throated Vireo	97	3	3	5	5	4	6	3	----	12	----	22	6	10	4	3	1	1	1	4	1	1	*	2	----
Solitary Vireo	96	----	----	16	----	----	2	----	----	----	----	2	*	2	4	7	----	----	----	----	----	6	44	13	----
Red-eyed Vireo	910	17	31	87	8	7	21	8	4	123	18	155	116	51	36	36	13	30	3	7	2	4	29	81	23
Philadelphia Vireo	6	----	----	----	----	----	----	----	----	----	----	----	*	----	*	----	6	----	----	----	----	----	*	*	----
Warbling Vireo	8	----	----	----	----	----	----	----	----	----	----	*	*	----	4	3	----	----	----	----	----	----	*	1	----

SPRING BIRD COUNT 1973	Total Individuals	COAST			COASTAL PLAIN					PIEDMONT												MTN.			
		Morehead City, N.C. 28 April	Wilmington, N.C. 23 April	Charleston, S.C. 29 April	Beaufort Co., N.C. 6 May	Pamlico Co., N.C. 29 April	Southern Pines, N.C. 28 April	Fayetteville, N.C. 28 April	Dillon, S.C. 1 May	Roanoke Rapids, N.C. 6 May	Henderson, N.C. 4 May	Raleigh, N.C. 28 April	Chapel Hill, N.C. 6 May	Greensboro, N.C. 28 April	Winston-Salem, N.C. 5 May	Iredell Co., N.C. 13 May	Stanly Co., N.C. 28 April	Charlotte, N.C. 5 May	Greenville, S.C. 5 May	Elkin-Ronda, N.C. 12 May	Caldwell Co., N.C. 30 April	Avery Co., N.C. 28 April	Yancey-McDowell Co., N.C. 28 April	Buncombe Co., N.C. 12 May	Brevard, N.C. 5 May
Black-and-white Warbler	285	4	7	11	7	----	9	5	----	49	7	19	21	3	7	1	18	3	----	----	2	2	40	56	14
Prothonotary Warbler	190	25	7	27	3	----	8	2	5	57	----	4	21	----	3	----	18	8	----	2	----	----	*	----	----
Swainson's Warbler	22	1	6	1	----	----	1	----	1	7	----	1	----	----	2	----	2	----	----	----	----	----	----	----	----
Worm-eating Warbler	37	2	3	----	----	----	3	1	----	2	----	1	2	----	2	5	----	----	----	----	----	----	8	8	----
Golden-winged Warbler	19	----	----	----	----	----	1	----	----	1	----	----	2	1	----	----	----	----	----	----	----	----	*	13	1
Blue-winged Warbler	12	----	----	1	----	----	1	----	----	2	----	3	1	----	2	1	1	----	----	----	----	----	----	----	----
Brewster's W. (hybrid)	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	*	----
Lawrence's W. (hybrid)	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
Tennessee Warbler	7	----	----	----	----	----	----	----	----	----	----	----	----	----	*	3	----	----	----	----	----	----	3	*	1
Orange-crowned Warbler	5	----	1	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----
Nashville Warbler	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	*	----
Northern Parula	706	26	160	265	14	5	8	9	7	74	4	43	22	1	17	11	----	7	1	----	----	----	26	4	2
Yellow Warbler	118	----	1	1	3	----	3	----	----	4	----	17	3	9	8	8	----	1	3	1	4	1	22	28	1
Magnolia Warbler	15	----	----	----	----	----	----	----	----	*	----	1	1	----	2	----	1	----	----	1	----	----	7	2	*
Cape May Warbler	162	----	----	----	----	----	----	----	----	*	----	8	2	6	95	32	----	1	2	----	2	----	2	10	2
Black-th. Blue Warbler	133	----	----	2	2	----	4	2	----	14	----	18	13	----	28	11	1	3	----	----	----	----	25	10	*
Yellow-rumped Warbler	1310	36	92	17	7	----	51	11	13	43	17	484	32	126	135	97	31	21	10	----	1	1	35	37	13
Black-th. Green Warbler	90	3	----	52	----	----	----	----	----	1	----	1	1	----	4	----	----	----	----	----	1	2	20	5	*
Cerulean Warbler	24	----	----	----	----	----	----	----	----	16	----	2	3	----	----	2	----	----	----	----	----	----	1	*	----
Blackburnian Warbler	33	----	----	1	----	----	----	----	----	*	----	----	----	----	4	2	*	----	----	1	----	----	22	3	----
Yellow-throated Warbler	364	31	72	148	8	3	5	4	----	31	4	19	9	4	2	3	----	----	1	----	----	----	15	4	1
Chestnut-sided Warbler	63	----	----	----	----	----	1	----	----	----	----	1	*	----	4	11	----	----	----	3	1	----	8	34	*
Bay-breasted Warbler	24	----	----	----	----	----	----	----	----	----	----	*	*	2	2	10	----	----	----	----	----	----	*	10	----
Blackpoll Warbler	122	----	----	1	----	----	----	----	----	10	----	3	1	6	8	32	----	3	2	6	----	----	2	47	1
Pine Warbler	338	22	27	93	9	8	14	7	*	31	7	38	25	9	18	10	9	1	1	3	----	----	4	2	----
Prairie Warbler	284	46	28	35	17	7	2	2	----	43	1	20	21	3	2	9	8	5	----	----	----	1	14	20	*
Palm Warbler	17	----	----	----	----	----	1	----	----	----	----	4	----	----	*	----	----	1	----	----	----	----	4	3	4
Ovenbird	230	2	----	3	5	----	7	----	----	6	13	33	23	18	13	1	----	1	1	1	1	1	15	61	25
Northern Waterthrush	33	----	----	2	----	----	2	----	----	10	----	4	10	1	*	----	----	----	----	3	----	----	1	----	----
Louisiana Waterthrush	50	----	----	1	1	1	1	2	----	6	----	10	10	----	1	----	----	2	----	----	----	----	9	6	*
Kentucky Warbler	83	1	1	4	----	----	1	----	----	32	2	12	8	1	3	1	----	----	----	1	1	----	9	6	----
Connecticut Warbler	1	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----
Common Yellowthroat	548	28	46	36	15	12	12	12	4	98	----	55	75	28	19	19	10	7	2	4	4	----	30	28	4
Yellow-breasted Chat	199	1	----	22	16	4	----	1	----	39	3	6	34	1	26	8	2	3	2	2	3	----	2	11	13
Hooded Warbler	254	12	15	55	8	5	8	4	2	13	3	45	16	2	3	3	----	----	----	----	----	2	22	33	3
Wilson's Warbler	1	----	----	----	----	----	----	----	----	*	----	*	----	----	----	----	----	----	----	1	----	----	----	----	----
Canada Warbler	18	----	----	----	----	----	1	----	----	*	----	*	2	----	*	1	----	----	----	----	----	----	5	9	----
American Redstart	273	----	2	----	----	----	8	2	----	72	4	5	102	2	32	1	12	5	1	9	1	----	10	4	1
House Sparrow	3500	144	272	10	254	187	64	28	141	102	77	168	29	399	191	61	826	265	10	27	61	54	38	72	20
Bobolink	377	*	2	24	2	26	----	----	----	8	----	110	1	----	----	54	42	----	25	----	----	2	----	76	5
Eastern Meadowlark	1237	54	25	7	16	7	18	41	7	98	22	122	72	128	154	121	161	40	14	9	18	8	15	49	31

Red-winged Blackbird	2724	265	392	178	50	126	25	22	45	160	20	356	63	314	227	74	115	40	4	21	14	35	69	63	46
Orchard Oriole	232	1	31	43	22	8	9	5	5	48	1	21	4	3	4	7	9	5	1	----	4	----	----	1	----
Northern Oriole	43	3	4	1	----	----	1	2	1	*	1	4	5	1	7	2	4	1	----	1	----	----	*	5	----
Rusty Blackbird	91	----	4	1	----	30	21	----	----	----	----	----	2	1	2	3	----	----	----	----	----	27	----	----	----
Brewer's Blackbird	36	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	28	3	3	----
Boat-tailed Grackle	591	50	380	161	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Common Grackle	6163	271	323	81	395	71	196	90	130	398	151	629	156	1280	263	153	656	245	17	25	95	144	161	128	105
Brown-headed Cowbird	1267	72	16	7	45	45	8	7	1	85	16	33	39	93	121	20	223	7	8	11	22	275	14	69	30
Scarlet Tanager	168	1	----	2	----	----	1	3	----	8	----	10	20	7	29	14	8	2	2	3	2	2	9	32	13
Summer Tanager	288	4	13	56	11	3	5	6	2	43	4	41	24	19	12	6	28	3	2	2	2	----	2	----	----
Cardinal	3291	118	161	223	74	28	74	59	52	183	42	291	214	315	287	94	440	113	5	59	88	85	74	105	107
Rose-breasted Grosbeak	113	----	----	1	----	----	3	1	----	2	2	2	2	3	12	2	1	3	3	----	----	2	1	50	23
Blue Grosbeak	171	7	1	14	22	5	*	1	4	19	----	20	10	9	3	19	21	9	11	----	----	----	2	----	*
Indigo Bunting	588	17	6	23	22	*	4	19	2	57	4	43	104	12	52	39	11	10	12	26	6	----	22	77	20
Painted Bunting	140	13	15	112	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Evening Grosbeak	824	93	30	----	1	----	54	35	5	1	2	126	3	58	8	----	247	----	4	3	64	70	5	3	12
Purple Finch	77	2	1	2	----	2	1	----	----	----	----	5	1	1	2	*	1	1	----	----	3	25	8	2	20
House Finch	*	----	----	----	----	----	----	----	----	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	----
Pine Siskin	401	*	----	----	----	----	40	----	----	----	----	39	8	21	44	----	17	----	----	27	58	1	----	32	114
American Goldfinch	1514	----	7	----	----	----	5	1	----	102	5	62	192	211	192	31	227	52	12	6	87	26	91	87	118
Red Crossbill	36	----	----	----	----	----	*	----	----	16	----	11	----	9	----	----	----	----	----	----	----	----	----	----	----
Rufous-sided Towhee	1651	19	96	112	28	22	42	28	15	110	25	188	94	119	154	76	151	61	5	12	32	30	29	111	92
Savannah Sparrow	180	31	19	5	----	2	14	6	----	46	----	33	4	15	1	----	----	4	----	----	----	----	----	----	----
Grasshopper Sparrow	43	----	1	----	----	----	----	1	----	3	----	9	----	----	2	9	----	----	----	----	----	----	2	16	----
Henslow's Sparrow	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7	----	----	----	----	----	----	----	----
Sharp-tailed Sparrow	20	18	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Seaside Sparrow	85	54	26	5	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Vesper Sparrow	14	----	----	----	----	----	----	----	----	----	----	----	*	----	----	----	----	----	----	----	----	----	4	10	----
Bachman's Sparrow	2	----	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Dark-eyed Junco	250	----	----	----	----	----	----	----	----	----	----	2	----	6	2	----	3	----	----	----	----	174	23	40	*
Tree Sparrow	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	*	----
Chipping Sparrow	707	3	6	17	9	2	8	5	5	37	7	54	36	129	148	22	113	3	8	3	7	13	24	26	22
Field Sparrow	683	*	10	----	13	12	7	10	1	52	2	88	66	48	156	10	45	37	4	1	28	9	46	26	12
White-crowned Sparrow	31	----	----	----	----	----	----	----	----	3	----	1	6	----	1	----	13	2	----	----	5	----	----	*	*
White-throated Sparrow	1475	18	114	56	14	6	56	55	4	125	7	332	107	205	146	9	68	8	2	2	45	7	49	13	27
Fox Sparrow	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	*
Swamp Sparrow	88	2	11	10	----	----	6	----	----	16	----	29	8	1	1	----	----	----	----	----	2	----	2	----	----
Song Sparrow	514	----	2	5	----	----	----	1	----	1	1	6	4	41	34	45	12	7	2	8	47	32	81	133	52
Total no. species	257	168	165	167	94	81	126	86	58	137	75	141	119	128	139	115	124	99	77	84	75	63	120	122	92
Total no. individuals	93512	9736	9568	5341	2724	1539	1709	1029	963	5291	1440	9039	3755	10879	5657	2325	6817	2130	372	739	1267	1637	3402	3733	2420
Field observers	366	12	22	15	10	3	5	24	1	8	11	23	35	37	30	8	19	14	7	10	7	17	7	19	22
Yard observers	129	9	2	0	0	0	6	3	2	0	1	5	0	3	5	6	48	1	2	3	9	0	0	9	15
Field parties	153	7	9	7	4	2	3	3	1	6	2	12	22	11	12	4	8	4	2	4	3	8	3	7	9
Party-hours	1244	59	108	48	28	18	45	20	12	59	9	75	93	115	101	50	60	26	11	50	36	63	25	63	70
Party-miles	3775	202	538	180	130	88	205	56	42	129	45	50	156	401	312	50	202	119	40	45	25	82	197	203	278

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*Seen in count area during count period but not on count day.

SPRING BIRD COUNT — 1973

ELOISE F. POTTER

Although the 1973 Spring Bird Count is no record breaker for the Carolinas in terms of the number of species found or individuals tallied, coverage of the 24 count circles was the best in the history of CBC. Only three counts spanned less than 12 hours from start to finish. Morehead City had workers afield from 05:00 until midnight, and most localities had parties out for at least 14 hours. Only two count areas had less than five field observers, only two recorded less than 75 species, and only one listed less than 700 individual birds. A total of 495 field and yard observers identified 93,512 birds of 257 species, only nine short of the 1972 all-time high of 266 species found on the count day.

Morehead City birders recorded the most species (168), closely followed by Charleston (167) and Wilmington (165). Raleigh led the inland counts with 141 species, but Winston-Salem (139) and Roanoke Rapids (137) were not far behind. Greensboro recorded the highest number of individuals, 10,879 birds.

All but four counts were taken between 28 April and 6 May. Wilmington had the earliest census (23 April), and three others took place in western North Carolina the weekend of 12-13 May. Weather conditions were generally excellent with above freezing temperatures, light to moderate winds, and no precipitation or heavily overcast skies. Two exceptions were in the mountains where observers found below freezing temperatures and high winds (60 mph or more) in Avery County and on Mount Mitchell in the Yancey-McDowell count area. Avery County also had up to ½ inch of ice and snow early in the day, truly unusual weather for 28 April even at Grandfather Mountain.

Among the least expected birds seen on count days were a Mississippi Kite at Roanoke Rapids, two Ground Doves (Greensboro), Least Flycatcher (Charleston), Olive-sided Flycatcher (Yancey-McDowell Counties), Lawrence's Warbler hybrid (Brevard), Nashville Warbler (Charleston), Connecticut Warbler (Winston-Salem), and Wilson's Warbler (Elkin-Ronda). Singing male Swainson's and Cerulean Warblers were found on territory near Roanoke Rapids, and this discovery was accompanied by a marked increase in the observed occurrence of these two species at several places in piedmont North Carolina. Among the more interesting inland shorebird records from the present count period are Stilt Sandpipers (Iredell County) and Black-bellied Plovers (Roanoke Rapids and Iredell County). For details of these and many other significant sight records, please read the Compilers' Comments. Their carefully prepared reports often contain important information that cannot be recorded in the count table.

COMPILERS' COMMENTS

COAST

MOREHEAD CITY, N.C. (center: 0.7 mile NW of Crab Point).

28 April. Common Loon migration was very light on count day, probably because of unfavorable weather. *Long-billed Dowitchers* (Micou Browne, Allen Powell, Compiler), at North River Marsh, were late. *Red-breasted Nuthatches* and male *Scarlet Tanager* (Compiler) were near Walker's Mill Pond. The nuthatches are late and are thought not to have been winter resident birds. For two additional Scarlet Tanager records see "Briefs for the Files" in this issue. These three sightings represent an unusual concentration of the species in this area. Two *Pine Siskins* at Charles Lincoln's feeder 4 and 5 May were unusual because the species apparently did not winter around Morehead City. – JOHN O. FUSSELL III, Box 520, Morehead City, N.C. 28557.

WILMINGTON, N.C. (center: Myrtle Grove Junction).

23 April. One Savannah Sparrow was an *"Ipswich Sparrow"* seen by Greg Massey out of habitat on a sandy hummock near the river and verified by Edna Appleberry. Micou Browne heard the *Grasshopper Sparrow* in a rice field at Orton. Many winter species had already left, but spring arrivals seemed to be late. – FRANCES B. NEEDHAM, P.O. Box 204, Wrightsville Beach, N.C. 28480.

CHARLESTON, S.C. (center: 14 miles NE of Mt. Pleasant and ½ mile E of Hwy 17).

29 April. Our highest species total since CNHS first participated in the Spring Bird Count in 1958. Previous highs were 164 species in 1967 and 162 in 1971. *Least Flycatcher* (Perry E. Nugent and Nelson W. Taylor) was identified by field marks and voice; Nugent is familiar with the species. *Blue-winged Warbler* was a male seen at close range by Dennis M. Forsythe. *Nashville Warbler* (PEN, NWT) was also a male and seen well; South Carolina has two previous records for early May, both inland (*South Carolina Bird Life,* p. 623). Previous late date for *Eastern Phoebe* (PEN, NWT) was 28 March (SCBL, p. 353). Previous late date for *Brown Creeper* (PEN, NWT) was 14 April (SCBL, p. 386). – JULIAN R. HARRISON, Biology Department, College of Charleston, Charleston, S.C. 29401.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: where Upper Goose Creek enters Pamlico River).

6 May.–GERALDINE COX, Route 1, Box 151-A, Merritt, N.C. 28556.

PAMLICO COUNTY, N.C. (center: in Florence at intersection of 1324 and 1329).

29 April. – GERALDINE COX, Route 1, Box 151-A, Merritt, N.C. 28556.

SOUTHERN PINES, N.C. (center: Niagara, 3 miles NE of Southern Pines).

28 April. *Double-crested Cormorant* (Compiler, Mrs. L.C. Davis) was seen at lakes 8½ miles apart. The one found by Mrs. Davis remained at Whispering Pines the rest of the day. One had also been seen in Whispering Pines area 20 and 27 April. There is a possibility more than one bird was involved, but only one was counted. Species has been recorded in vicinity only twice prior to 1973. Four of the seven *Mallards* were a mated pair and two small young. *Common Terns* (James F. Parnell, Frances Needham) were at Thagard's Lake, Whispering Pines (second spring record for area). *Cliff Swallow* (Compiler, Parnell) is rare in spring. *Gray-cheeked Thrushes* (Compiler) were at widely separated sites (only two previous spring records). *Golden-winged Warbler* (Compiler, Parnell) was a male (third spring record). *Chestnut-sided Warbler* (Compiler) is a very uncommon spring transient here. Five *Red Crossbills* (Compiler) were near Southern Pines on 13 May. – J.H. CARTER III, P.O. Box 891, Southern Pines, N.C. 28387.

FAYETTEVILLE, N.C. (center: Clark Park).

28 April. Participants in the Fayetteville bird count were shocked and saddened to learn of the death of their compiler, John S. Butler Jr., in an automobile accident on 2 May. The report was completed and submitted for publication by Mrs. Neill A. Currie Jr., 1104 Brook Street, Fayetteville, N.C. 28305. Regarding Mr. Butler's leadership of the census, Mrs. Currie commented, "John was out on the count day from dawn until nightfall, when with lesser spirits dwindling away he was left with two companions. His boundless enthusiasm and cheerfulness, as usual, made the day for the group."

DILLON, S.C. (center: Dillon).

1 May. Not a single *Common* ("Yellow-shafted") *Flicker* was seen on the count day. – JOHN H. WILSON, Box 535, Dillon, S.C. 29536.

ROANOKE RAPIDS, N.C. (center: 1.4 miles SE of Weldon).
6 May. Flock of 18 *Double-crested Cormorants* seen flying over Roanoke Rapids Lake (Ross Silcock, Compiler) had been present since 22 April. The *Mississippi Kite* (Harry LeGrand) was an adult bird in flight over Johnston Farm, Occoneechee Neck. Habitat is floodplain forest near the Roanoke River. On 12 May the Compiler saw the bird at the same location, which is also the same place an immature was recorded last June (*Chat*, 36:112). *Turkeys* (three parties) were at Occoneechee Neck. *White-rumped Sandpiper* (Compiler) was at mudflats of construction site near Roanoke Rapids, and two were there the next day (first spring record for area). Seven *Swainson's Warblers* (HL, RS) were all singing males on territory in Roanoke River canebrakes. Sixteen *Cerulean Warblers* (John Wright, R. Silcock) were also on territory in floodplain forest along the Occoneechee Neck portion of Roanoke River. Compiler found an additional 10 birds in same area 12 May for an amazing total of at least 26 Cerulean Warblers, mostly males and probably breeding. See "Briefs for the Files" in this issue for details on count period sightings of Glossy Ibis, Bald Eagle, and Purple Gallinule. – J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

HENDERSON, N.C. (center: Henderson).
4 May. – A.W. BACHMAN SR., 111 Jennette Avenue, Henderson, N.C. 27536.

RALEIGH, N.C. (center: Norfolk and Southern R.R. crossing on Lake Wheeler Road).
28 April. The outstanding find was a *Swainson's Warbler* seen by Chris Marsh along Swift Creek. The bird was seen again (and photographed) at the same spot on 29 and 30 April. Also unusual is the *Laughing Gull* (Ross Silcock) at Lake Wheeler on 27 April. – R.J. HADER, 3313 Cheswick Drive, Raleigh, N.C. 27609.

CHAPEL HILL, N.C. (center: intersection of Franklin and Columbia Streets).
6 May. Our more unusual reports were of two *Semipalmated Plovers* (Forrest Calhoon), three *Cerulean Warblers* (Annie Leigh Broughton, Johnnie Payne, Gertrude London, and Carol Callaghan), six *White-crowned Sparrows* (J.R. Harding), and count period Warbling and Philadelphia Vireos (Angelo Capparella III). – JAMES O. PULLMAN, Route 6, Box 149, Chapel Hill, N.C. 27514.

GREENSBORO, N.C. (center: transmitter of Radio Station WBIG).
28 April. *Upland Plover* was seen by Rose Avery, Carolyn Brown, Kenneth Brown, and Jean McCoy. Two *Ground Doves* were seen by Inez Coldwell, Frank Fish, Mildred Fish, Emma Leah Perrett, Maude William, Helen Zuk, and others. *Red Crossbills* were found by Dot Garrett. – DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N.C. 27408. [Upland Plover = Upland Sandpiper.—ED.]

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Parkway).
5 May. *Chuck-will's-widow* (Gardner Gidley, Margaret Gidley, Hewson Michie) was calling with Whip-poor-will. *Ringed Turtle Doves* (Bob Witherington, Charles Frost) were a mating feral pair. *Connecticut Warbler* (BW, CF) was well seen; individuals have been found around Winston-Salem several times during migration this year and last. *Brewer's Blackbird* (Mary Eriksen) was at a ground feeder where it was compared with Common Grackles. *Cape May Warblers* were unusually abundant during migration period. – C. ROYCE HOUGH, 713 Lankashire Road, Winston-Salem, N.C. 27106.

IREDELL COUNTY, N.C. (center: Hwy 115 at Yadkin River).
13 May. *Caspian Tern* was seen by Compiler. Three *Stilt Sandpipers* were at a 5-acre private lake at the home of Mr. and Mrs. Ralph Goforth near Olin. Mrs. Goforth heard the birds calling as they circled the lake. She was able to move within 100 feet of the birds at the water's edge. She saw the barred breast and distinctive face pattern. The

birds arrived in the late afternoon and were gone the next morning. Mrs. Goforth also reported the *Black-bellied Plover.* Warbler migration was evidently at its peak. We noted *Tennessee Warblers* (Flippen Jones, Larry Marlin) for the fourth consecutive year. *Cerulean Warbler* was seen by Bobby Mize, Lois Goforth, and Compiler. – JANE S. MULLEN, 408 Salisbury Road, Statesville, N.C. 28677.

STANLY COUNTY, N.C. (center: 2 miles NW of Badin).

28 April. *Swainson's Warbler* (Raymond Barker, David McCarn) was seen and heard. Compiler also heard song, compared it to recording, and concurred in the identification. *Henslow's Sparrows* (Vivian Whitlock, Compiler) were chased over a field of weeds and rye stubble until identification could be verified. Count period *Bald Eagle* was reported by Bill Calloway, a taxidermist. – VERA CROOK (Mrs. Barrett Crook), P.O. Box 219, Albemarle, N.C. 28001; Mrs. John Whitlock, assistant.

CHARLOTTE, N.C. (center: intersection of South Boulevard and Woodlawn Road).

5 May. *Yellow-crowned Night Herons* (Flo Cobey) have previously nested in the area. *Wood Duck* count was a female with 18 young. *Least Sandpiper* (FC) was found again in York County, S.C. *Black-billed Cuckoo* (FC) has rarely been reported on a count. A nest of the *Ruby-throated Hummingbird* was located, and a late brown plumaged Purple Finch was noteworthy. – JOE and BECKY NORWOOD, 1329 Goodwin Avenue, Charlotte, N.C. 28205.

GREENVILLE, S.C. (center: Hwy 29 and 291).

5 May. – ROSA LEE HARDIN (Mrs. W.B. Hardin Sr.), Cleveland, S.C. 29635.

ELKIN-RONDA, N.C. (center: 3 miles N of Elkin on US 21).

12 May. Male *Wilson's Warbler* (David Hassee, Mrs. Lee Hassee) was in thickets of the wooded floodplain of Yadkin River. – LIN HENDREN, Box 148, Elkin, N.C. 28621.

CALDWELL COUNTY, N.C. (center: Lenoir)

30 April. – HELEN MYERS, 310 Beall Street, N.W., Lenoir, N.C. 28645.

MOUNTAINS

AVERY COUNTY, N.C. (center: Grandfather Golf and Country Club).

28 April. – This is our best count to date in spite of the unusual weather conditions with up to ½ inch of snow and ice, temperatures as low as 22 F, and winds up to 60 mph. –MRS. RICHARD C. PROCTOR, 381 Westview Drive, S.W., Winston-Salem, N.C. 27104.

YANCEY-McDOWELL COUNTIES, N.C. (center: 2.3 miles S of Buck Creek Gap on NC 80).

28 April. Two *Virginia Rails* were about ¼ mile apart in a marshy area near Greenlee; thin bill, gray cheeks, reddish-brown underparts were noted by Compiler. *Yellow-bellied Flycatcher* (Walter Hall) was seen and heard at close range; yellowish underparts, especially the throat, carefully noted. *Olive-sided Flycatcher* was seen at close range and heard by Compiler. *Prothonotary Warbler* was seen in a large tract of swampy land near Greenlee the week before the count (Compiler, WH). *Tennessee Warblers* (WH, RS) had gray head, white line over eye, thin bill. –JOSEPH L. HALL, Route 8, Box 1136, Asheville, N.C. 28806.

BUNCOMBE COUNTY, N.C. (center: intersection US 70 and SR 2740, Swannanoa).

12 May. *Common Loons* (five observers) were flying over a lake in the North Fork area. *Osprey* (Robert Brown) was over same lake. *Greater Yellowlegs* (Gordon Mahy) were on Warren Wilson College grounds for second spring count record. *Bewick's Wren*

and *Warbling Vireo* (Dorothy Griffin) were in same general area as the Traill's Flycatcher (DG, Compiler, and others). *Orange-crowned Warbler* (Joseph Hall, Chris, Gladys, and Wendy Rustay) was at Kenilworth Lake; identified by call with most field marks visible. Philadelphia Vireo, Brewster's Warbler, Nashville Warbler, and Tree Sparrow were reported seen during the count period in Beaverdam Valley by Mary Sawyer. –ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

BREVARD, N.C. (center: 7.5 miles SE of Brevard at junction of US 276 and SR 1536 at Cedar Mountain).

5 May. *Mallards* appeared to be wild birds. *Peregrine Falcon* (Claude and Eleanor Viens) was killed when it struck a window. Bank Swallows (six observers) and Cliff Swallows (Hazel and Hervey Roberts) are considered uncommon here. *Lawrence's Warbler* (Bernice and Hugh Hollifield) was seen in an extremely remote area of young growth timber. Compiler found Prairie Warbler in same area the next day. –WALTER C. HOLLAND JR., 290 Maple Street, Brevard, N.C. 28712.

OBSERVERS

MOREHEAD CITY, N.C.: Clint and Doris Benbow, Micou Browne, Alfred Chestnut, John and Mary Fussell, John Fussell III, Willie Johnson, L.J. Klein, Joyce Lewis, Charles Lincoln, Dorothy Lokey, Lynn Mosely, Doris Oakley, Allen Powell, Karen Ross, Harold Sears, Francis Wade, Tom Wade, E.W. Wagner, Marjorie Windley.

WILMINGTON, N.C.: Katherine Alexander, Edna Appleberry, Robert Brown, Micou Browne, J.H. Carter III, Betty and Lloyd Davis, David DuMond, Dot Earle, Kitty Kosh, Harry Latimer III, Edmund LeGrand, Harry LeGrand Jr., Debbie Mann, Greg Massey, Ann Nicholson, James F. Parnell, Pete Roberts, N.T. Ross, Mary Urich, Charlotte Waggett.

CHARLESTON, S.C.: William D. Anderson, E.B. Chamberlain, W. David Chamberlain, Calvin Clyde, Eyelyn Dabbs, Dennis M. Forsythe, Julian R. Harrison, Bobbin and David Huff, Peter B. Laurie, Perry E. Nugent, Zachary T. Ralston, John K. Reed, Grant B. Staley, Nelson W. Taylor.

BEAUFORT COUNTY, N.C.: Ethel Barkley, Geraldine Cox, Louise Gamble, James McLaurin, Mary McLaurin, Glenn Paul, Louise Satterthwaite, Mary Lee Smith, Hugh Sterling, Mary Wilson.

PAMLICO COUNTY, N.C.: Geraldine Cox, Billy Paul, Glenn Paul.

SOUTHERN PINES, N.C.: Dana Carter, Eleanor Carter, J.H. Carter III, Mrs. L.C. Davis, L.M. Goodwin Jr., Frances Needham, James F. Parnell, Frances Parnell, Lura Williams, Mary K. Wintyen, Ethel Wotton.

FAYETTEVILLE, N.C.: Mr. and Mrs. Garrett Bergman, David Bingham, John S. Butler Jr., Derb Carter Jr., Davis Chambers, Mrs. Jonathan E. Courtney, Mrs. David Cromartie, Mrs. E.H. Evans Jr., Mrs. Charles T. Haigh Jr., Charles T. Haigh III, August Jakubiac, Mrs. Volney Kyle, George Lepper, Mr. and Mrs. Lockamy, Joyce Lipe, Kevin Lipe, Walter Moorman, Frank Moorman, Debbie Nietman, Henry A. Rankin Jr., Mrs. Sam Rankin, Mrs. J.A. Shaw, Mrs. W.D. Sherman.

DILLON, S.C.: Mrs. Mamie Bradfield, Mrs. Mary Turbeville, John H. Wilson.

ROANOKE RAPIDS, N.C.: Bill Collier, John Fussell, Harry LeGrand, J. Merrill Lynch, Louise Parker, Ross Silcock, Ray L. Winstead, John Wright.

HENDERSON, N.C.: Neita Allen, Mrs. and Mrs. A.W. Bachman, Annie G. Burroughs, Ruth Carter, Mrs. Walter Dallas, Mrs. Sam R. Harris, May Hunter, Ethel H. Kirby, Mrs. Russell Parham, Paul Stewart, Mrs. J.D. Williams.

RALEIGH, N.C.: Dorothy and Norman Bell, Bill Brown, Jean Donaldson, Charlotte Hilton Green, R.J. Hader, Ray and Jeanne Halsey, R. Jeraht, Mabel Jones, Ken Knapp, Joshua and Janice Lee, Edmund and Harry LeGrand, Chris Marsh, Marilyn Middleton, Edna Miller, T.L. Quay, Ross Silcock, Linda and Sterling Southern, Edwin Sparks, David Stevens, Gail and David Whitehurst, Ray Winstead, John Wright.

CHAPEL HILL, N.C.: Stanley Alford, Anne Barnett, Tom Barnett, John Batten, Annie Leigh Broughton, Elizabeth Calhoun, Carol Callaghan, Angelo Capparella III, Ed Davis, Mrs. George Doak, Oliver Ferguson, William Hallahan, J.R. Harding, Herman Henkle, Russell Hoverman, Alexander Hull, Elinor Irvin, Logan Irvin, Paul Koepke, Mrs. Paul Koepke, Gertrude London, Stella Lyons, Ted Nixon, Johnnie Payne, James Pullman, Barbara Roth, Mrs. Daniel Sherk, Mary Stoudenmire, Elizabeth Teulings, Robert Teulings, Bill Wagner, Margaret Wagner, Eleanor Wagstaff, Adelaide Walters.

GREENSBORO, N.C.: Carolyn Allen, Donald Allen, Rose Avery, Laurie Bolger, Carolyn Brown, Kenneth Brown, Inez Coldwell, Madolyn Cason, G.W. Daniels, Frank Fish, Mildred M. Fish, Dot Garrett, Jean Gertz, Howard H. Groover, Duncan Hollar, Beth Johnson, Ellene Kirk, Benjamin S. Lambeth, Kathryn Lambeth, James Mattocks, Jean McCoy, Ida Mitchell, Beryl Norcross, Elizabeth Ogburn, Cora W. Parsons, Emma Leah Perrett, Bruce Pickard, Etta Schiffman, Catherine Shaftesbury, George Smith, Irene Smyre, Thomas E. Street, Helen Surratt, Marjorie Tays, William Tays, Joan Tipton, Michael Tove, Daphne Weisner, Maude Williams, Helen Zuk.

WINSTON-SALEM, N.C.: Fran Baldwin, Olive Boice, William Boice, Zach Bynum, Pat Clubertson, Mary Eriksen, Charles Frost, Gardner Gidley, Margaret Gidley, Bill Hammond, Fred Hill, Ruth Hill, Royce Hough, Dwight Lee, Pollyanna Lee, Janice Levitt, Ann Listokin, Mary McGehee, Hewson Michie, Cynthia Olsen, John Olsen, Mary Olsen, Jim Orgain, Barbara Page, Molly Parker, Betty Pitt, Jackie Shelton, Dot Shiffert, Jerry Shiffert, Ramona Snavely, Bob Witherington.

IREDELL COUNTY, N.C.: Lois Goforth, Ralph Goforth, Flippen Jones, Larry Marlin, Bobby Mize, Jane Mullen, Sarah Nooe, Anne Terman.

STANLY COUNTY, N.C.: Raymond Barker, R.D. Blake, Margaret Crawley, Vera Crook, Barrett Crook, Mattie Gereg, Rudy Gereg, Virginia Foglio, Ken Hahn, Terry Hahn, Nelle Hinson, Louise Johnson, Vera Littleton, David McCarn, Harold Morris, Anne Olsen, Taimi Olsen, John Whitlock, Vivian Whitlock.

CHARLOTTE, N.C.: Elizabeth Clarkson, Bill and Flo Cobey, Helen Coley, Adrian and Beth Dykema, Gwen Fenninger, Ruth Hannes, Susannah Kaylor, Elizabeth Millwee, Joe and Becky Norwood, Shuford and Katherine Peeler, Ed Read (Mecklenburg Audubon Society and guest).

GREENVILLE, S.C.: Mary Austin, Ruth Gilreath, Rosa Lee Hardin, Gladys Hart, Lillie Hart, Mamie Kanaley, Martha Lawrence, William Lawrence, May Puett.

ELKIN-RONDA, N.C.: Chip Campbell, E.A. Harris, Virginia Hart, David Hassee, Mrs. Lee Hassee, Lin Hendren, Ola Hendren, Fred Masten Jr., W.P. Smith, Bobby Tysinger, Charlene Tysinger, Charles Tysinger, Jerry Tysinger.

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General Field Notes

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JULIAN R. HARRISON, Associate Editor
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First South Carolina Record of Harcourt's Storm-Petrel

JAY SHULER
Box 288, McClellanville, S.C. 29458

Late in the afternoon of 20 June 1972, I observed a petrel on a freshwater pond at my home 5 miles S of McClellanville, Charleston County, S.C. The pond is separated from salt marsh by a narrow dike. The petrel appeared to be exhausted by the winds of tropical storm Agnes, still blowing. The bird was photographed, then picked up alive, but died in a few hours.

At first I thought the bird to be the British Storm-Petrel *(Hydrobates pelagicus)*, as the tail did not appear to be slightly forked, a characteristic of the similar Harcourt's. However, both Drs. Alexander Wetmore (U.S. National Museum) and Oliver L. Austin Jr. (Florida State Museum) have identified the specimen as Harcourt's Storm-Petrel *(Oceanodroma castro)*. This is the first record of this species for South Carolina and the second record for the Southern Atlantic Coast Region. A single Harcourt's Storm-Petrel was observed at Atlantic Beach, N.C., on 22 June 1972 (*American Birds*, 26:844). This bird was also blown ashore by tropical storm Agnes.

The specimen was contributed to the Charleston Museum, and it was prepared as a study skin (Ch.M. No. 72.37) by Dennis M. Forsythe, Citadel Biology Department. It is a male with the following measurements (in mm): total length 176, wing 147, tail 75, tarsus 21, and bill (from feathers) 16. Its weight was 34 grams, the stomach was empty, and there was no fat.

Escaped Caracara in Northeastern North Carolina

FRANK B. AYCOCK JR.
P.O. Box 427, Elizabeth City, N.C. 27909

On 31 May 1972 at Shawboro in Currituck County in northeastern North Carolina Mrs. Aycock and I saw a Caracara (*Caracara cheriway*). Evelyn Griffin reported its presence to us on 30 May, and early on 31 May we located the bird perched on a mailbox in a yard in Shawboro. We were able to approach to within 15 feet of the bird and studied it from every angle in good light. All field marks including the presence of the carmine color at the base of the bill, the black cap, and the mottled breast were noted. The bird appeared somewhat sluggish and walked rather than hopped. Its stance was upright. It was capable of flight.

Caracara
at Shawboro, N.C.
(Photo by
T.M. Gregory)

I attempted to have photographs made, but the bird was not present when the photographer visited the site. I discovered later that Thomas Michael Gregory photographed the bird sometime during the week of 29 May 1972. One of his photographs has been submitted with this article.

In an attempt to find out if the bird was an escape I wrote a letter to the editor of the Norfolk *Virginian Pilot.* The letter appeared on 8 September 1972, and the following day an editorial feature appeared commenting on the presence of the bird. There has been no response to this inquiry.

[Dept. Ed. – A discussion between Robert P. Teulings and Mitchel A. Byrd of the Biology Department of William and Mary University at the meeting of the Wilson Ornithological Society and the Carolina Bird Club at Chapel Hill during the spring of 1973 provided the first clue that the Shawboro Caracara might be an escaped bird. After Dr. Teulings relayed the message to me, a further check with Dr. Byrd resulted in his making inquiry in Norfolk. It was learned that indeed a Caracara did escape from the Norfolk Zoo in early May of 1972. In fact a second Caracara also escaped in July of 1972. Thus the late May sighting discussed above was almost certainly the bird that left the Norfolk Zoo early in May. This bird then does not represent a new species for the North Carolina list.

[This detailed editorial discussion is designed to indicate how difficult it is to obtain accurate reports from owners when exotic birds escape. Note that Mr. Aycock actually had a letter of inquiry in a Norfolk newspaper but received no confirmation of the escape. His experience further points out the need for extreme care in dealing with such records on the part of both the reporter and the editor. We appreciate Mr. Aycock's careful reporting of the sighting and Dr. Byrd's cooperation in ascertaining the dates of the Caracara escapes.]

An Instance of Purple Sandpiper Feeding Away from Rock Jetties in North Carolina

JOHN FUSSELL
Box 520, Morehead City, N.C.

13 March 1973

On 11 March 1973, while birding at Bird Shoal, opposite Beaufort, N.C., I discovered a Purple Sandpiper (*Erolia maritima*). I watched in amazement as it fed with Short-billed Dowitchers (*Limnodromus griseus*) and Dunlins (*Erolia alpina*) on a section of the shoal where sand flats predominate. There are no rock jetties within 1 mile of the location of this sighting. The Purple Sandpiper fed by both probing and picking. I approached to within 20 feet of it, and I noticed that it seemed shyer than Purple Sandpipers I have observed on rock jetties. I watched it for at least 15 minutes.

At the time of the sighting, the wind was from the SW at approximately 10 mph. When the bird was first sighted, visibility was restricted to about 100 feet due to heavy fog. After 15 minutes, the fog was dissipating rapidly, and visibility was over 1 mile. The tide was falling very rapidly.

In winter, Purple Sandpipers are largely restricted to rocky seashores and rock jetties (Peterson, *A Field Guide to the Birds,* 1947). In North Carolina, I know of only one instance when this species has been seen away from a rock jetty or similar structure. On 31 December 1967, Micou Browne (pers. com.) observed a Purple Sandpiper at Oregon Inlet.

During this winter (1972-1973), I occasionally found a Purple Sandpiper at the Ft. Macon jetties or at the Radio Island jetty. However, it was often absent from these localities for several days at a time. It is likely that the Purple Sandpiper found at Bird Shoal was this same bird, and it is possible that it had been feeding on Bird Shoal regularly during the winter. (There are no other major jetties at the inlet or on the nearby ocean front).

The Purple Sandpiper at Ft. Macon was often seen feeding in close association with Ruddy Turnstones (*Arenaria interpris*) and/or Sanderlings (*Crocethia alba*), both of which feed and roost at Bird Shoal. It was probably the close association with these species that led to the Purple Sandpiper's "learning" to use Bird Shoal. It is notable that on 28 January 1973, I saw "the" Purple Sandpiper feeding on a concrete ramp at Radio Island (next to the rock jetty) with Ruddy Turnstones.

A Black-headed Gull at Pea Island N.W.R.

JOHN S. WRIGHT
D-25 McKimmon Village, Raleigh, N.C. 27607

24 April 1973

At approximately 10:30 on 23 April 1973 while returning to Raleigh from Hatteras, N.C., I stopped at Pea Island National Wildlife Refuge to scan some flocks of shorebirds. The refuge manager, John Williamson, who was parked nearby, approached me and asked my assistance in identifying a gull that was feeding alone on a nearby mudflat. He indicated that a Black-headed Gull (*Larus ridibundus*) had been reported to him earlier in the day and he was attempting to verify the report. I studied the bird at a range of approximately 25 yards through a 15-40X scope and noted immature plumage, with the small black spot behind the eye. However, adult (red) coloration was noted on legs and bill with the bill appearing entirely red except for a dark tip. I flushed the bird at close range (15 yards) and observed the wing pattern with 7X binoculars as it flew a short distance. The upper wing surface and back coloration matched the description shown in *Birds of North America* (Robbins et al., 1966), which was in hand. The black edging of the primaries was a thin line, unlike the more conspicuous black edging of the Bonaparte's Gull. Furthermore, there was very little contrast between the front white wing patches and the grayer area of wing and back, also unlike Bonaparte's Gull. At this point the identification of the bird as a Black-headed Gull was assured by the combination of distinct wing pattern and red bill. The similar Bonaparte's Gull has a black bill. No Bonaparte's Gulls had been seen in the area on the day in question or for the two previous days.

Of further interest was the feeding behavior of this gull, which I observed and would describe as a regular splashing with the feet in a small pool of water, followed by probing with the bill. Upon later referring to *Handbook of British Birds,* (Witherby et al., 1941) I found that "Trampling on wet mud or sand or in shallow water to bring up worms is a regular habit" of the Black-headed Gull. This feeding behavior, which I had never seen before, further assured the identification.

The Black-headed Gull at Pea Island is apparently the second record of the species in North Carolina, the first sighting having occurred at Fort Macon on 10 August 1967 (Cox, 1968).

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Observations of the Barn Owl in the Southern Appalachian Mountains

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7 January 1973

As pointed out by Van Tyne and Berger (1959), the Barn Owl (*Tyto alba*) is one of the most widely distributed of all birds, occurring throughout the western hemisphere, Eurasia, Australia, and many island groups. In light of this extensive distribution, it is interesting that the first two editions of *Birds of North Carolina* (Pearson et. al., 1919, 1942) list no records of the owl from the Appalachian Mountain region of western North Carolina. Furthermore, the rather thorough field work in the region by Brewster (1886), Cairns (1887, 1889, 1891, 1894), Oberholser (1905), and T.D. Burleigh (pers. com.) contain no records of the owl from the area. To date, there are only three published records of the bird from western North Carolina. Pearson, Brimley, and Brimley (1959) mention a report from "Lake Summit" but give no supporting details; and Johnston (1964) mentions a bird reported at Highlands, Macon County, N.C., in the summer of 1962, but again no details are given. The only observation with substantiating data is Stupka's (1963) report of a single bird collected at Fontana Village,Graham County, N.C., on 24 September 1947 and brought to him for identification.

In light of the paucity of records, the authors sent inquiries to a number of ornithologists and conducted field work in much of the region in search for Barn Owls. The following records have come to light as a result of the investigation.

In Buncombe County, N.C., John Young (pers. com.) found two dead Barn Owls in an abandoned administration building at the old Asheville-Henderson Airport in August and October 1971. Young also reports seeing Barn Owls on several occasions along the French Broad River south of Asheville, but the exact dates and localities are not available. Subsequently, Ruiz found a dead Barn Owl on 17 August 1972 along Rt. 191 approximately 100 yards S of the Haywood Road Overpass.

In Henderson County, J. Lee and Barbara Brittain (pers. com.) informed us that a pair of Barn Owls nested for two consecutive years in an out building on the Old Turnpike Road near Mills River, with two young being successfully fledged in June of 1971. The owls abandoned the site in October 1971 and have not been reported there since that time.

At Highlands, Toliver Curnkleton (pers. com.) informed us that the Barn Owl is a "summer resident and probably a permanent resident" with specific records coming during the summers of 1965, 1966, and 1967. Thelma Howell (pers. com.) reported that the record mentioned by Johnston (1964) was based on a single Barn Owl that was heard calling each night near Lake Ravenel at the Highlands Biological Station from 26 June through 9 July 1962 by R.E. Gordon and William Woolcott. These records from the Highlands Plateau represent the highest elevation at which the bird has been reported in the southern Appalachians, with the observations coming from 3,800 feet to 4,100 feet.

A total of twelve records of the Barn Owl have been reported from the Appalachian Mountain region of western North Carolina. These sightings have been from four counties, Buncombe, Henderson, Macon, and Graham, all located in the southern portion of the mountain region. A single record of successfully fledged young indicates that the bird breeds in the area, and the highest elevation at which the species has been reported is at 4,100 feet on the Highlands Plateau of Macon County. The extent of the species' occurrence in the region and its status during the winter months are unknown. Observers should remain alert to document additional records of the Barn Owl in the southern Appalachian Mountains.

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Red-cockaded Woodpecker in Laurens County, S.C.

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22 February 1973

On 11 May 1972, through the cooperation of District Ranger Junius O. Baker Jr., I visited a colony of Red-cockaded Woodpeckers (*Dendrocopus borealis*) in the Enoree Ranger District of the Sumter National Forest. While this colony has previously been surveyed by Melvin L. Hopkins, Wildlife Assistant, USDA, Forest Service, it has not been reported in *The Chat.*

The colony is located just off SC Hwy 72, 12 miles E of Clinton, Laurens County, S.C. *South Carolina Bird Life* (1970, p. 339 and 611) records the Red-cockaded Woodpecker inland along the western edge of the coastal plain to Aiken, Richland, Lee, and Chesterfield Counties. The Laurens County site extends the range of the species approximately 50 miles into the South Carolina piedmont. Newly discovered piedmont breeding colonies have also been reported recently in North Carolina (*Chat*, 35:54; 37:17) and Virginia (*American Birds*, 26:843).

Five adult Red-cockaded Woodpeckers were noted on the initial trip with one nesting hole found occupied. Several subsequent visits revealed adults carrying food to the nest cavity on 15 May and young birds calling within the tree 18 May. The nest hole was 12 feet 8 inches from the ground on the west side of a 40-foot loblolly pine (*Pinus taeda*). The immediate area was relatively open with a young pine understory 4 to 5 feet high. Old fire scars on many tree trunks indicate that fire was responsible for the present forest condition.

Red-cockaded Woodpeckers continued to be sighted in Sumter National Forest through December, indicating the existence of a permanent colony in Laurens County.

Cerulean Warbler Found in North Carolina in Summer

J. MERRILL LYNCH
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According to Pearson, Brimley, and Brimley (*Birds of North Carolina,* 1959), the Cerulean Warbler (*Dendroica cerulea*) breeds sparingly in North Carolina. Breeding records from three western piedmont and mountain localities are cited, all of these dated between 1909 and 1930. I am not aware of any additional published breeding records for the state. Observations in Northampton County during the summer of 1972 indicate that the breeding range of the Cerulean Warbler in the state may be considerably more extensive than previously reported.

On 16 June 1972 Chris Marsh and I discovered a small colony of three to four singing males along the Roanoke River in Northampton County about a mile downstream from Halifax. These birds were in a mature river-bottom hardwood forest. The site is on the western edge of the coastal plain at an elevation of about 40 feet. The birds were first seen here in late April and May (Lynch, *American Birds,* 26:750) and were thought to be spring migrants. On 16 June at least one of the males was paired, and the female was watched repeatedly carrying grubs and insects to the top of a hackberry (*Celtis occidentalis*) 70 to 80 feet tall. Each time she approached the tree with food we heard high, chippering notes coming from the spot where she entered. These were unmistakably begging calls from the nestlings. Because of the height and the dense foliage we were unable to see either the nest or young. Subsequent trips during the summer yielded no further evidence of nesting although males were still singing continuously at least until 19 July.

On the afternoon of 24 June, Harry LeGrand, Edmund LeGrand, and I discovered a group of at least five singing male Cerulean Warblers while driving along US 21 about 11 miles N-NW of Elkin in extreme NE Wilkes County, N.C. We stopped and saw two males along the roadside. These birds were in steep, rocky deciduous woods on a mountainside at an elevation of about 2,100 feet. They were far from any creek or water source. Lack of time and the steep terrain prevented a thorough search for positive evidence of nesting.

To the best of my knowledge these observations are the first summer records for the Cerulean Warbler in North Carolina in 42 years. This apparent absence of recent records is evidently attributable to the lack of extensive summer field work in the state, especially in the northwestern section. The most interesting aspect of the 1972 sightings is the totally different habitat and geographical location of the two colonies. The Halifax colony was in the low coastal plain in river-bottom forest, while the Wilkes County birds were in mountainous terrain far from a major water source. These apparently isolated breeding populations follow quite closely the same distribution pattern exhibited by two other warblers, the Black-throated Green Warbler and Swainson's Warbler, both of which have isolated coastal plain and mountain breeding populations. This idea of two separate populations is speculation until more field work can be done, but there is some supporting evidence. F.R. Scott (*Raven*, 29:118) found a singing male in Chickahominy Swamp in SW New Kent County, Virginia, on 12 June 1948. In the summer of 1958 he again found several males in the same swamp and vicinity, but no positive nesting evidence was secured. This area is only about 80 miles NE of the Halifax colony and seems to relate both geographically and ecologically to the Halifax site. Also, in parts of the Virginia and West Virginia mountains, especially on steep, deciduous hillsides, the Cerulean Warbler is locally common in several breeding bird census plots (*American Birds*, Vol. 20-26, December issues 1966-1972). The Wilkes County birds seem to relate to this segment of the population. The exact status and distribution of the Cerulean Warbler in North Carolina should be determined by future summer field work.

Addendum: Extensive field work by the author in June 1973 revealed that at least 25 pairs of summering Cerulean Warblers were present and apparently nesting at the Halifax colony.—JML

Brown-headed Cowbird Increases in North Carolina Mountains

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The Brown-headed Cowbird (*Molothrus ater*) appears to be on the increase in the North Carolina mountains. Eugene P. Odum found no cowbirds during a survey of breeding birds of the Highlands plateau in 1946-1947 (*Ecology*,31:.587-605). In a similar breeding bird census in Highlands in 1959, 1960, and 1971, I found the cowbird absent. In the spring of 1972, however, the cowbird appeared in the area around the Highlands Biological Station and in an overgrown field 6 miles E of Highlands. Both adults and young have been noted during late May and early June of 1972. They appear to be common. David W. Johnston, in reporting the birds of the Highlands area in 1964, classified the cowbird as uncommon with only one observation during the breeding season (Jour. Elisha Mitchell Sci. Soc., 80:30-38). Their recent increase has been noted in other areas of the North Carolina mountains as well as in the Highlands area. Because the presence of these birds affects the population density of other birds, variations in the Brown-headed Cowbird population should be carefully noted.

CONSERVATION

(Continued from Page 65)

New Book

A long awaited book has just emerged that will prove invaluable to anyone who grows wild flowers. *Growing Wildflowers*, by Marie Sperka (Harper & Row, Publishers, Inc., 10 East 53rd St., N.Y. 10022, $8.95), fullfills a need for a practical guide to soil requirements, site preparation, and the specialized needs of each individual species. Marie Sperka, a long time personal friend, has many years experience in growing wild flowers and runs a nursery at Crivitz, Wisconsin. She is a dedicated conservationist and one of the very few nursery operators who raises all of her stock, collecting from the wild only where roads or development threaten natural habitat. Marie has successfully grown bog plants in sphagnum moss on an aluminum foil base, and she has succeeded with many rare beauties extremely difficult to propogate.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates 1973)

COMMON LOON: An unusually high inland count of 33 was recorded at Roanoke Rapids Lake, Halifax County, N.C., on 8 April by Merrill Lynch, and 21 were noted at Thagard's Lake near Whispering Pines, N.C., on the same date by Jay Carter. A lingering migrant was seen on the late date of 29 May at Lake Wheeler near Raleigh, N.C., by Ross Silcock.

RED-THROATED LOON: Over 1,000 were seen in Pamlico Sound from the Cedar Island-Ocracoke, N.C., ferry on 18 April by P. William Smith.

SHEARWATERS AND PETRELS: On 26 May a cruise was taken by charter boat to the Gulf Stream 30 to 60 miles off Morehead City by Harry LeGrand, Edmund LeGrand, Richard Rowlett, and Harold Wierenga. On 3 June a cruise in the same waters was taken by Robert Ridgely and a party of students. Recorded were:

Cory's Shearwater	1 by LeGrand party, 26 May
	9 by Ridgely party, 3 June
Greater Shearwater	2 by LeGrand party, 26 May
	34 by Ridgely party, 3 June
Sooty Shearwater	12 by LeGrand party, 26 May
	2 by Ridgely party, 3 June
Audubon's Shearwater	6 by LeGrand party, 26 May
Wilson's Storm Petrel	150 by LeGrand party, 26 May
	110 by Ridgely party, 3 June

Four Wilson's Storm Petrels were observed off the Fort Macon jetty at Beaufort Inlet near Atlantic Beach, N.C., on 27 May by Robert Hader.

DOUBLE-CRESTED CORMORANT: Sidney Gauthreaux observed a single bird at Lake Hartwell near Clemson, S.C., on 31 March. Previous records indicate that wanderers of this species have only occasionally been reported in the western piedmont. Locally rare occurrences were also noted at Raleigh where an individual was seen at Lake Wheeler on 15 April by Ross Silcock, and at Whispering Pines, N.C., where another individual was found on 20 April by Jay Carter. The bird at the latter location lingered in the vicinity for more than a month.

GREAT BLUE HERON: Merrill Lynch observed a flock of 43 gathered on a mudflat at Roanoke Rapids Lake near Vultare, N.C., on 2 April.

CATTLE EGRET: Two were briefly seen at Roanoke Rapids Lake on 24 April by Merrill Lynch. Elsewhere, two transients were found in Gaston County, N.C., on 1 April by Scott Juelfs. Single spring visitors were recorded in the Raleigh, N.C., area on 10 April by Robert Hader, 3 May by Harry LeGrand, and 3 June by Chris Marsh.

GREAT EGRET: Two were uncommon inland visitors at Salem Lake near Winston-Salem, N.C., on 1 April, Charles Frost,Robert Witherington, et al. Four were also found inland near Roanoke Rapids, N.C., on 29 May (Merrill Lynch).

GLOSSY IBIS: One was seen in flight over Gaston, N.C., near the Roanoke River on 29 May by Merrill Lynch. No previous spring records are known to the observer for that inland locality.

WHITE IBIS: Three were seen at Pea Island N.W.R., well north of their usual range, on 11 May by David Johnston and N.F. Williamson.

BLUE-WINGED TEAL: Two tardy spring transients were sighted near Bethania in Forsyth County, N.C., on 12 May by Ramona Snavely.

BUFFLEHEAD: Four late lingerers were still present at Pea Island N.W.R. on 26 May, Plumer Wiseman.

LESSER SCAUP: A good local count of 139 was recorded at Roanoke Rapids Lake on 10 April by Merrill Lynch.

RED-BREASTED MERGANSER: Merrill Lynch reported a spring peak of 155 at Roanoke Rapids Lake on 1 April; six birds lingered there as late as 13 May.

SWALLOW-TAILED KITE: An individual was observed on 30 March by Paul Buckley at Buxton Woods on the Outer Banks near the village of Buxton. Gilbert Grant later sighted two birds in the same vicinity on 12 May. One was also seen at Fort Fisher, N.C., on 23 April by Harry and Edmund LeGrand.

BALD EAGLE: Known nesting sites in South Carolina in the Charleston, Huger, and Georgetown areas were occupied by three pairs with young in mid-March, Ted Beckett. However, aerial reconnaissance in January and February by the U.S. Fish and Wildlife Service failed to turn up any evidence of current nesting activity in the coastal region of North Carolina, as reported by Don Harke. Single sightings were reported of an immature Bald Eagle at Oregon Inlet, N.C., on 16 May by N.F. Williamson and an adult in Northampton County, N.C., near the Roanoke River on 26 May by Robert Ake, Paul DuMont, and party.

MERLIN: One was seen on 4 April at North Wilkesboro, N.C., by Wendell Smith; one on 6 April at Oregon Inlet by Jack and Eloise Potter; and one on 6 May in Caswell County, N.C., by Fenton Day.

PURPLE GALLINULE: An uncommon visitor was seen on Bogue Banks near Atlantic Beach, N.C., on 14 April by John Fussell. Several individuals were also recorded this spring at Pea Island N.W.R. by N.F. Williamson. Merrill Lynch reported a first record for Northampton County, N.C., where a single bird was seen on the Johnston Farm in the Occoneechee Neck area on 12 May.

AMERICAN COOT: A late-straggling migrant was seen inland on 26 May in Caswell County, N.C., by Gordon Woody and another at Chapel Hill on 28 May by James Pullman.

SEMIPALMATED PLOVER: One on 30 April, two on 20 May and one on 24 May were uncommon inland migrants at Lake Hartwell near Clemson, S.C., observed by S.A. Gauthreaux and R.C. Beason. Several sightings totalling six birds were also recorded during the same period in the Roanoke Rapids, N.C., area by Merrill Lynch.

BLACK-BELLIED PLOVER: One was found inland near Gaston, N.C., on the Roanoke River on 26 May by Merrill Lynch.

UPLAND SANDPIPER: A rather late migrant was present at the Downtown Airport in Greenville, S.C., on 14 May, S.A. Gauthreaux.

WHIMBREL: At least 100 were seen on the beaches at Cape Lookout, N.C., on 18 May by John Fussell.

WILLET: Noteworthy inland occurrences were recorded at Lake Hartwell near Clemson, S.C., where 10 birds were seen on 5 May by J.J. Hebrard and at Roanoke Rapids Lake where four birds were seen near Vultare, N.C., on 22 May by Merrill Lynch.

LESSER YELLOWLEGS: Migrants were found in the western piedmont section where two birds were found at Kerr Scott Reservoir near North Wilkesboro, N.C., on 25 April by Wendell Smith and 10 at Lake Hartwell near Clemson, S.C., on 2 May by Sidney Gauthreaux.

RED KNOT: An individual in spring plumage was found at Roanoke Rapids Lake near Vultare, N.C., on 22 May by Merrill Lynch.

PURPLE SANDPIPER: A late lingerer in spring plumage was still present at Fort Macon near Atlantic Beach, N.C., on 26 and 27 May, Robert Hader.

PECTORAL SANDPIPER: An inland migrant was found near Raleigh on 20 March by Ross Silcock. Others were noted at Roanoke Rapids Lake on 20 April by Merrill Lynch, at Lake Hartwell on 2 May by Sidney Gauthreaux, and at Kerr Scott Reservoir on 20 May by Wendell Smith.

WHITE-RUMPED SANDPIPER: Near Clemson, S.C., single birds were seen at Lake Hartwell on 20 and 24 May by S.A. Gauthreaux and R.C. Beason, and one was seen on 28 and 29 May at Greenview Farm near Raleigh by Chris Marsh and Ross Silcock.

LEAST SANDPIPER: Spring migrants were regular visitors at Roanoke Rapids Lake from 30 April through 27 May where a high count of 73 was recorded on 1 May, Merrill Lynch. Ten were recorded at Lake Hartwell near Clemson on 30 April by Sidney Gauthreaux with subsequent sightings there through 20 May. Two were also seen in Wilkes County, N.C., by Wendell Smith on 7 May.

DUNLIN: Two transients in full spring plumage were found at Roanoke Rapids Lake on 22 May, the second local record, Merrill Lynch.

SEMIPALMATED SANDPIPER: A count of 45 on 20 May highlighted a series of sightings by S.A. Gauthreaux and R.C. Beason at Lake Hartwell near Clemson, S.C. Spring migrants were also noted by other observers near North Wilkesboro, Raleigh, and Roanoke Rapids, N.C. The reported dates spanned the period from 30 April to 1 June.

WESTERN SANDPIPER: Five were noted inland near Raleigh, N.C., at Greenview Farms on 3 May by Chris Marsh.

BLACK-NECKED STILT: Two were early at Pea Island N.W.R. on 15 April, Steve West.

WILSON'S PHALAROPE: John Fussell observed a male at North River Marsh near Morehead City, N.C., on 21 May, which is believed to be the first spring record for Carteret County.

NORTHERN PHALAROPE: Thirty were seen in waters off Morehead City, N.C., during a pelagic cruise to the Gulf Stream on 26 May by Harry LeGrand, Edmund LeGrand, Richard Rowlett, and Harold Wierenga.

POMARINE JAEGER: Two were seen in waters off Morehead City, N.C., during a pelagic cruise to the Gulf Stream on 26 May by Harry LeGrand, Edmund LeGrand, Richard Rowlett, and Harold Wierenga.

PARASITIC JAEGER: An adult in light-phase plumage was sighted in waters off Morehead City, N.C., by Robert Ridgely and party on 3 June.

HERRING GULL: Significant numbers of inland migrants were seen in the Roanoke Rapids, N.C., area where a peak count of 90 was recorded on 30 April, Merrill Lynch. A locally rare occurrence of 15 was noted at Whispering Pines on 8 April by Jay Carter.

RING-BILLED GULL: Late lingerers were noted by Merrill Lynch at Roanoke Rapids Lake near Roanoke Rapids, N.C., where 33 were still present on 27 May and two on 4 June.

LAUGHING GULL: An uncommon inland visitor was sighted in Wake County, N.C., at Lake Wheeler on 26 April by Ross Silcock. Several were also seen in Halifax County, N.C., at Roanoke Rapids Lake by Merrill Lynch during the period 6 to 15 May.

GULL-BILLED TERN: One was early at Cape Romain N.W.R. in South Carolina on 18 March, Perry Nugent.

COMMON TERN: Inland appearances were noted at Roanoke Rapids Lake where a single bird was seen on 30 April and six on 21 May by Merrill Lynch.

BRIDLED TERN: Eight were observed during a cruise to the Gulf Stream off Morehead City, N.C., on 26 May by Harry and Edmund LeGrand, Richard Rowlett, and Harold Wierenga.

BLACK TERN: A sighting of two at Roanoke Rapids Lake on 21 May provides the first local spring record for the Roanoke Rapids, N.C., area, Merrill Lynch.

BLACK-BILLED CUCKOO: A very late individual was closely observed at Lake Raleigh in Wake Co., N.C., on 24 June by David Whitehurst and Chris Marsh.

SAW-WHET OWL: One was seen near Hollister in Halifax County, N.C., on 6 April by Merrill Lynch.

CHUCK-WILL'S-WIDOW: A locally rare spring visitorwas heard calling several miles east of Hillsborough in Orange County, N.C., on 10 May by J.R. Hoverman.

GRAY KINGBIRD: One was carefully identified at Sullivan's Island near Charleston, S.C., on 17 April by Steve West, fide Dennis Forsythe.

SCISSOR-TAILED FLYCATCHER: An out-of-range wanderer was seen by Fred Hack at Hilton Head Island, S.C., on 12 May.

YELLOW-BELLIED FLYCATCHER: A migrant of this species was sighted 30 miles at sea off Morehead City, N.C., by Harry LeGrand, Edmund LeGrand, Richard Rowlett, and Harold Wierenga during a pelagic curise on 26 May. The bird circled the boat at close range permitting visual identification.

OLIVE-SIDED FLYCATCHER: One was found at North Wilkesboro, N.C., on 25 May by Wendell Smith.

TREE SWALLOW: A locally early transient was seen at Chapel Hill, N.C., on 17 March by James Pullman. At Roanoke Rapids, N.C., an early arriving flock of over 200 was observed 18 March by Merrill Lynch.

BANK SWALLOW: One was noted as early as 5 April at Raleigh, N.C., by Robert Hader. Late migrants were seen along the coast at Oregon Inlet on 21 May by Gilbert Grant and off Morehead City on 26 May by Harry LeGrand and party.

CLIFF SWALLOW: Two early migrants were seen at Umstead State Park near Raleigh, N.C., on 6 April by Robert Ridgely.

PURPLE MARTIN: One was seen at Morehead City, N.C., as early as 27 February, Bob Simpson.

COMMON RAVEN: At Clemson, S.C., an unexpected sighting of two birds was recorded on 15 April by Sidney Gauthreaux. The current residence status of the species in NW South Carolina needs to be investigated.

FISH CROW: One was seen and heard calling at Clemson, S.C., on 5 May by Sidney Gauthreaux, a rare and apparently first record for that western piedmont locality.

RED-BREASTED NUTHATCH: A late straggler was seen in northern Wake County, N.C., on 18 May by Robert Ridgely.

SHORT-BILLED MARSH WREN: Spring migrants were recorded in the western piedmont at Clemson, S.C., where three were found singing on 1 May by Sidney Gauthreaux. Transients were also noted in the Raleigh, N.C., area where individuals were seen on 3 May by Harry LeGrand and 17 May by Ross Silcock.

BROWN CREEPER: A very late straggler was seen in Caswell County, N.C., on 20 May by Gordon Woody.

AMERICAN PIPIT: A late-lingering winter visitor was seen on 23 May at the Raleigh-Durham airport in Wake County, N.C., by Harry LeGrand and Ross Silcock.

SOLITARY VIREO: A pair was found building a nest in Duke Forest near Durham, N.C., on 14 May by Ray Winstead and Elizabeth Teulings. This species is not known to breed regularly in the Durham area.

ORANGE-CROWNED WARBLER: One was seen at Southern Pines, N.C., on 15 April, a first local spring record there, Jay Carter.

CERULEAN WARBLER: One was late and uncommon at Raleigh on 21 May, Harry and Edmund LeGrand.

BLACKBURNIAN WARBLER: Two observed on 12 May in Northampton County, N.C., by Merrill Lynch were rare spring visitors in that locality.

CHESTNUT-SIDED WARBLER: One was a late and locally uncommon transient at Southern Pines, N.C., on 26 May, Jay Carter.

MAGNOLIA WARBLER: Late migrants were seen at Durham, N.C., on 23 May by Robert Ridgely and at Raleigh, N.C., on 26 May by Chris Marsh and Ken Knapp.

MOURNING WARBLER: One was banded on 26 May at Hillsborough, N.C., by Charles Blake.

WILSON'S WARBLER: Spring migrants were noted by various observers over a wide area of the central and eastern North Carolina piedmont with dates spanning the period from 20 April to 22 May. Sightings were reported from Caswell, Orange, Wake, and Northampton Counties.

CANADA WARBLER: The first known spring record for Northampton County, N.C., was recorded by Merrill Lynch at Occoneechee Neck where a lone migrant was seen on 12 May.

BOBOLINK: On 20 May a flock of over 500 late migrants was seen near Wilmington, N.C., by Kitty Kosh, and 200 were seen on that same date in the Roanoke Rapids area by Merrill Lynch. Migration of this species was evidently still in progress through the end of the month as indicated by reports of late sightings at Chapel Hill, N.C., by James Pullman and at Georgetown, S.C., by Robert Ridgely on 27 May.

BALTIMORE ORIOLE: A late transient was seen on the coast near Verona in Onlsow County, N.C., on 26 May by Gilbert Grant.

SCARLET TANAGER: Two were recorded as rare spring migrants in the coastal area on 21 April at Morehead City, N.C., by Clint and Doris Benbow. Another was seen in the same general locality at Gloucester on 29 April by J.A. Meadows.

DICKCISSEL: A transient was seen near Durham, N.C., on 18 April by Robert Ridgely. Elsewhere, an immature male was found singing in a rural area near Winston-Salem, N.C., on 10 May by Fran Baldwin and Ramona Snavely. The bird was seen there again on 24 May, but there was no indication of nesting.

EVENING GROSBEAK: Most winter visitors departed in late April and early May, although some lingered through mid-May including three individuals that were present at Charles Lincoln's feeder in Morehead City, N.C., as late as 18 May.

PURPLE FINCH: A late straggler was seen at J.R. Hoverman's feeder near Durham, N.C., on 27 May.

HOUSE FINCH: Winter occurrences were noted at Hickory, N.C., and Sumter, S.C., in addition to the nine cities listed in the 1972 Christmas Count Summary (see March 1973 *Chat*). At Hickory up to 30 visitors were counted at Garvin Hughes' feeder during a peak period in late December. At Sumter, Evelyn Dabbs observed a lone visitor at her feeder on 28 February.

RED CROSSBILL: An extraordinary series of late sightings were recorded in North Carolina in the wake of last winter's wide-spread invasion. Those records are:

26 May	Fayetteville	David Bingham
3 June	Warren County	Harry LeGrand
3 June	Raleigh	Gail Whitehurst
7 June	Southern Pines	Jay Carter
7 June	Roanoke Rapids	Merrill Lynch
13 July	Clayton	Chris Marsh and David Whitehurst

SAVANNAH SPARROW: A late lingerer was noted at Roanoke Rapids, N.C., on 26 May by Merrill Lynch.

SHARP-TAILED SPARROW: One was a surprising find near Winston-Salem, N.C., on 24 May, far inland for the species. The bird was carefully identified by Charles Frost, Ruth Hill, and Ramona Snavely.

CLAY-COLORED SPARROW: A well-marked individual was seen and heard singing at Clemson, S.C., on 29 and 30 April by S.A. Gauthreaux and J.J. Hebrard.

LINCOLN'S SPARROW: One was seen on 11 May at Clemson, S.C., by J.J. Hebrard.

Carolina Bird Club

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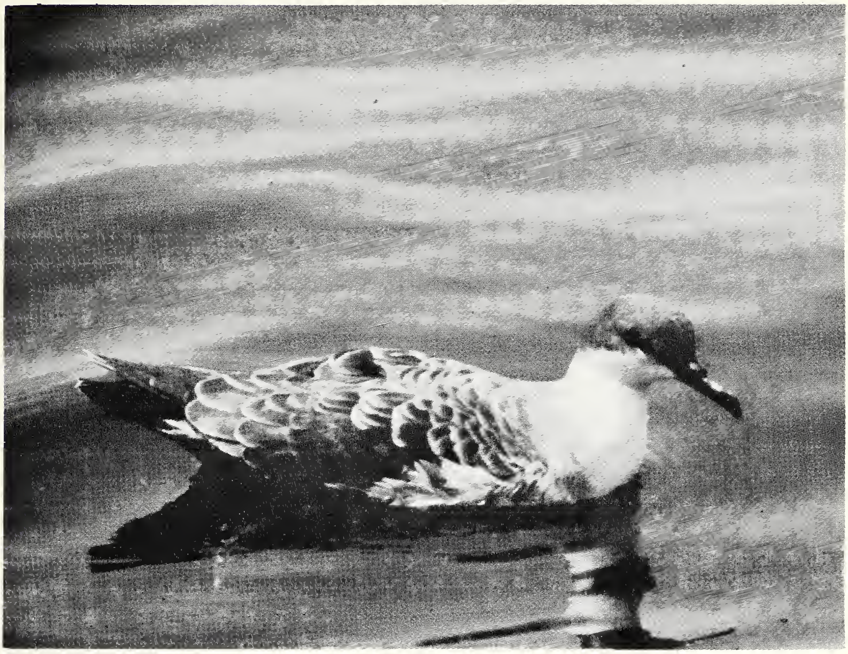

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OUR COVER—A Greater Shearwater swims in the Atlantic Ocean off Morehead City, N.C. The bird was photographed by Robert Ridgely of Duke University on 3 June 1973.

COMPARISON OF ANTING RECORDS FROM TWO LOCALITIES IN NORTH CAROLINA

DORIS C. HAUSER[1]

Between March 1964 and September 1968 Eloise F. Potter (1970) recorded 25 episodes of anting by 45 wild birds of 9 species at Zebulon, Wake County, N.C. Between June 1958 and June 1966 I saw 48 episodes of anting by 59 wild birds of 13 species at Fayetteville, Cumberland County, N.C. While Fayetteville and Zebulon are only 65 air miles apart, they are in distinctly different geographic zones. Zebulon is at the eastern edge of the piedmont plateau, and its sandy-loamy soil supports upland mixed pine-hardwood forest. Snowfall can be expected several times each winter, but extended periods of subfreezing weather are rare. Fayetteville lies in the coastal plain slightly southeastward from Southern Pines and Pinehurst, sharing the sandy soil and mild temperatures that made these North Carolina resorts famous. The Sandhills region generally has not more than one good snowfall each winter. Dominant tree species are the long-leaf pine *(Pinus palustris),* loblolly pine *(P. taeda),* turkey oak *(Quercus laevis),* and blackjack oak *(Q. marilandica).*

METHODS

All but three of the anting episodes described in this paper took place in the yard of my home at Fayetteville, where ground-level and elevated feeders have been maintained since 1956. A windowed bay gives a full view of the sloping backyard, and I am usually able to keep watch there from 08:00 to 1800. Unusual activities are verified by use of a 7 x 35 binocular.

DEFINITION OF TERMS

The definitions given by Potter (1970) are used in this paper. "Active anting" refers to a bird's picking up live ants with its bill and inserting them among the feathers. In "passive anting" the bird remains, often with body flattened against the ground in a sunbathing posture, where ants can crawl among the feathers and subsequently removes the ants with typical anting motions. "Typical anting motions" are the peculiar twisting of wings and tail accompanying the insertions of ants among the feathers in active anting or their removal in passive anting. A "treatment" in active anting is the capture of an ant (or ants) and the subsequent insertion of the bill among the feathers. In passive anting a treatment includes each period of waiting for the ants to crawl upon the bird and their subsequent removal from the plumage. An "episode" refers to one or more treatments by one or more individuals without any significant interruption. (Two birds anting simultaneously or one immediately after the other are participants in a single episode.)

In addition to the terms used by Potter, I classify anting according to intensity. "High intensity anting" includes those episodes in which birds appear to be in a state of ecstasy, tumble over, or continue the activity for more than 5 minutes without significant interruption. In "medium intensity anting," birds exhibit some of the above behavior characteristics, but the episode as a whole is more like "low intensity anting," which is brief, casual, or half-hearted, possible consisting of only one treatment.

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[1] Deceased 30 March 1972.

RESULTS

During six consecutive years (June 1958 through November 1963) and in June 1966, I saw altogether 48 episodes of active anting by 59 wild birds of 13 species (Table 1), namely: Mourning Dove 3, Red-bellied Woodpecker 6, Red-headed Woodpecker 1, Yellow-bellied Sapsucker 1, Blue Jay 14, Brown Thrasher 1, American Robin 5, Starling 7, House Sparrow 2, Common Grackle 3, Cardinal 11, Rufous-sided Towhee 4, and White-throated Sparrow 1. Records are listed in Table 1 and in the descriptions below according to calendar months to facilitate discussion of the seasonal aspects of anting behavior.

March.—On 22 March 1961 I saw House Sparrows feeding and pressing their breasts into the soil where an ant bed had been located in 1959 and 1960. A few tiny ants could be seen carrying food, apparently corn meal from the feeder. Occasionally an individual among the flock of 6 to 10 sparrows would ant its wings, breast, and back.

April.—I have no record of anting in April although my notes contain many records of sunbathing for this month.

May.—On 31 May 1960 an adult Blue Jay anted briefly at 11:10, picking ants off its legs and treating primaries.

On 31 May 1961 three Starlings and two adult Common Grackles were foraging on the front lawn at 09:20. One grackle anted the under side of its primaries while walking about on the ground. Grackles were among seven species of birds that sunbathed the previous day.

On 14 May 1962 at 14:20 an adult Mourning Dove that was walking slowly in the shade began anting with jabs into breast, belly, tail, and rump. Mourning Doves, Blue Jays, and Cardinals had been sunbathing off and on since 12:20.

On 15 May 1962 at 12:10 an adult Mourning Dove anted at the squirrel sprawl. The bird ate with steady pecks, then snatched two or three times and dug into breast, belly, and back plumage. Birds of five species had been sunbathing off and on since 09:45. Sunning behavior occurred frequently on 16 and 18 May, occasionally on 19 and 20 May, and frequently 21, 22, and 23 May.

At 15:30 on 23 May 1962 an adult female Red-bellied Woodpecker flew to the pine tree at the porch and began to peck under the bark plates and especially from a scar which later investigation showed to be plugged with hard sand. After each peck the bird would dress its plumage. A male Red-bellied Woodpecker had sunbathed at 13:15.

June.—On 5 June 1958 at 13:40 an adult female Red-bellied Woodpecker anted while clinging to the outside of the entrance to the nest cavity where she and her mate were taking turns incubating eggs. She would peck some unseen object from the rim or interior of the hole and use it to dress her wings and body plumage. There was no ecstasy, just a methodical pulling of her feathers through her bill after each peck. She was in full sun on a cloudy day.

On 28 June 1958 at 13:55 several Starlings were sunning on the lawn. Two others were walking with bills wide open, picking ants from the ground, and running bills down the inner side of the primaries with typical anting motions. The wide open bill position of these two birds suggests that they were experiencing more body heat than the other birds present in the yard that afternoon. Sunbathing on this date was mostly confined to minor fluffing of feathers.

On 13 June 1960 a juvenile Red-bellied Woodpecker anted with something pecked from the bark of a dead crotched branch in the ailanthus *(Ailanthus altissima)*, popularly called tree-of-heaven.

On 21 June 1960 a male Red-bellied Woodpecker pecked into the dead perch limb above the nest hole in a stumpy dead branch high in a living pine tree. The bird repeatedly dug into the wood and preened in the manner of anting.

On 5 June 1963 at 17:30 an adult female Common Grackle anted, treating one wing two or three times, then the other. A young grackle fed at the same ant bed but did not dress its plumage. At 17:40 the female returned and made one treatment.

Mrs. John Stewman reported having observed anting in her yard at Fayetteville for a period of several days during the early morning hours. On 18 June 1963 I visited her home. Cardinals had anted wildly at 08:15, prior to my arrival. Mrs. Stewman said one had tumbled downhill from the spot where winged ants were emerging from a rotting stump. At 09:20 an adult American Robin in molt ate ants and anted. Another robin (with white of under-tail feathers thrust upward through tail) anted its shoulders and back. Two female Cardinals anted excitedly, mostly treating primaries and bend of wing. One of the previously mentioned robins anted for 5 minutes without pause except to change position. The bird then ate ants for a long time. Ants remaining on the robin's body and feet occasionally incited an anting gesture. I never saw any of these birds discard an ant after a treatment.

Around noon on 24 June 1966 I saw a Red-headed Woodpecker anting on the ground in bright sunlight. Repeatedly the bird would pick up a tiny ant and zip down the wing. The woodpecker was low to the ground with wings outspread and plumage not fluffed.

July.—At 14:05 on 4 July 1959 House Sparrows were dusting lengthily in full sun at the ant bed. Large reddish ants were very active, perhaps repairing nests after rains of 2 and 3 July. One sparrow hopped into the midst of the ants, jumped and pecked wildly at its legs, then flew about 6 feet away and continued removing ants from legs and belly, eating some and rubbing some through plumage. The bird jumped violently at times, apparently having been stung by ants still on its body. House Sparrows and seven other species sunbathed during the remainder of the afternoon, but I saw no further anting activity.

On 19 July 1960 at 09:30 an adult Common Grackle, after feeding, flew to an ant bed, snatched ants, wiped primaries with swift strokes three times, and walked away.

On 27 July 1960 at 08:45 I discovered a molting juvenile American Robin anting with high intensity, picking up ants and running them through plumage, sitting on its tail, and falling over. Anting continued for 3 minutes after I arrived at the window. No other robins were in sight.

On 16 July 1961 at 16:00 a Mourning Dove was walking in the yard and anting with quick gestures.

On 17 July 1961 at 12:15 an adult Starling anted using large red ants and stripping through primaries with lightning fast movements. The bird moved from sun to shade, walking fast and remaining in constant motion. It treated primaries of both wings with the same bill contents, added more ants, and again stripped through primaries of both wings. The partly closed bill was shaggy with protruding ants. Every now and then the bird paused to eat all the accumulated ants, collected another bill full, and resumed the treatments. It never treated the body plumage or any area other than the wings.

On 19 July 1961 at 12:15 a molting juvenile Blue Jay anted its primaries, belly, and under-tail coverts. In treating the crissum the jay would snatch an ant, hop back to sit on its tail, thrust with bill, and up again to snatch another ant. After about 2 minutes the bird flew into a tree, but it returned in a minute and anted actively for 3 minutes. While on the ant bed the jay moved about constantly, snatching ants from its feet and legs to use for dressing plumage. The bird was obviously aware of being stung by the ants.

Much sunbathing took place on 7, 8, and 9 July 1962 even though skies were overcast all three days. At 09:30 on 9 July a molting juvenile American Robin was feeding at an ant bed. Twice it anted primaries.

On 27 July 1962 at 14:35 I saw anting by an adult Starling in almost complete winter plumage. Many species of birds had sunbathed in the hour prior to the anting episode.

TABLE 1. Anting by 59 birds of 13 species at Fayetteville, N.C., 1958-1966.

Date/Time	Species of Bird	Weather Conditions	Species of Ant
22 March 1961 No time given	House Sparrow, *Passer domesticus*	Torrents of cold rain previous day and night	*Pheidole morrisi*
31 May 1960 11:10	Blue Jay, *Cyanocitta cristata*	Thin sun through clouds	*Pogonomyrmex badius*
31 May 1961 09:20	Common Grackle, *Quiscalus quiscula*		
14 May 1962 14:20	Mourning Dove, *Zenaida macroura*	Clear, warm	
15 May 1962 12:10	Mourning Dove	Clear, hot	
23 May 1962 15:30	Red-bellied Woodpecker, *Centurus carolinus*	Overcast, hot	
5 June 1958 13:40	Red-bellied Woodpecker	Cloudy	
28 June 1958 13:55	Starling, *Sturnus vulgaris* (2)	Clear, hot	
13 June 1960 No time given	Red-bellied Woodpecker	Clear, hot	
21 June 1960 No time given	Red-bellied Woodpecker		
5 June 1963 17:30	Common Grackle	Overcast, hot	*P. badius*
18 June 1963 08:15	Cardinal, *Cardinalis cardinalis* (2)	*Cool and overcast following rain	*Lasius umbratus*
18 June 1963 09:20	American Robin, *Turdus migratorius* (2), Cardinal (2)	*Cool and overcast following rain	*L. umbratus*
24 June 1966 12:00	Red-headed Woodpecker, *Melanerpes erythrocephalus*	Bright sun	
4 July 1959 14:05	House Sparrow	*Heavy rain during night of 2-3 July; clearing during episode	*P. badius*
19 July 1960 09:30	Common Grackle	Overcast, mild	*P. badius*
27 July 1960 08:45	American Robin	*Clear and warm	*P. badius*
16 July 1961 16:00	Mourning Dove	Hot	
17 July 1961 12:15	Starling	*No data	
19 July 1961 12:15	Blue Jay	*Overcast, sultry	*P. badius*
9 July 1962 09:30	American Robin	Overcast	*P. badius*
27 July 1962 14:35	Starling	Clear, cool	
1 Aug. 1960 08:25	Blue Jay	*Overcast	*P. badius*
28 Aug. 1960 16:55	Rufous-sided Towhee, *Pipilo erythrophthalmus*	*No data	
30 Aug. 1960 08:40	Rufous-sided Towhee	Clear, hot	*Iridomyrmex pruinosus*
14 Aug. 1961 11:30	American Robin	Overcast, cool	

Date/Time	Species of Bird	Weather Conditions	Species of Ant
22 Aug. 1961 13:30	Blue Jay	*Torrential rain through morning; overcast; soil wet	*P. badius*
2 Sept. 1960 13:20	Cardinal	Overcast, misty rain	
5 Sept. 1960 09:05	Red-bellied Woodpecker	Sunny	
15 Sept. 1960 08:15	Rufous-sided Towhee		
28 Sept. 1960 10:17	Red-bellied Woodpecker	Cloudy but bright, coolish	
5 Sept. 1961 10:05	Brown Thrasher, *Toxostoma rufrum*	Hot, sunny	*P. badius*
13 Sept. 1961 13:30	Blue Jay (2)	Cloudy, hot	*Crematogaster ashmeadi*
18 Sept. 1961 17:45	Rufous-sided Towhee	Overcast, mild	
9 Sept. 1962 15:30	Starling	Heavy rain at 13:30; hot and sultry	
10 Sept. 1962 08:10	Blue Jay (2)	*Overcast, humid after rain of 9 Sept.	*P. badius*
27 Sept. 1962 16:55	Starling	*No data	
1 Oct. 1959 18:00	Blue Jay	*No data	
4 Oct. 1961 17:15	Cardinal	Mild	
6 Oct. 1961 09:30	Starling	Cool, sunny	*Camponotus socius*
9 Oct. 1961 17:15	Cardinal	Very warm	*L. niger neoniger*
3 Oct. 1962 16:05 & 17:20	Cardinal (2) Cardinal (2)	*Rain at 12:00, showers through afternoon	
26 Oct. 1963 16:50	Blue Jay	*Following overnight rain	*C. socius*
13 Nov. 1959 15:15	Blue Jay (2)	Sunny, warm	
25 Nov. 1961 16:40	Yellow-bellied Sapsucker, *Saphyrapicus varius*	Clear, sunny, very cool	
5 Nov. 1963 17:10	White-throated Sparrow, *Zonotrichia albicollis*	*Cool, misty rain	*Acanthomyops claviger*
17 Dec. 1959 12:30	Blue Jay (2)	*Overcast, mild	

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*High intensity anting during episode(s).

August.—On 1 August 1960 at 08:25 a juvenile Blue Jay anted with full sweeps through the primaries into the belly, sitting on its tail and falling over.

On 28 August 1960 a molting juvenile male Rufous-sided Towhee anted for fully 5 minutes beginning at 16:55. The bird would snatch an ant and thrust its bill through the partly black primaries or make a sharp dab at the vent while sitting on its tail. After anting, the towhee sunbathed in Level III (Hauser, 1957).

On 30 August 1960 the same young male Rufous-sided Towhee, marked by black primaries and secondaries broadly banded with white, anted again but with only medium intensity.

On 14 August 1961 at 11:30 a molting juvenile American Robin anted its primaries briefly while foraging in the yard.

On 22 August 1961 at 13:30 a juvenile Blue Jay anted with high intensity.

September.—On 2 September 1960 an adult female Cardinal, in molt, anted briefly at 13:20. The bird treated the primaries with three series of three treatments each, moving to a new area for each series.

On 5 September 1960 at 09:05 a juvenile Red-bellied Woodpecker, still with no red on its head, perched on a cone at the top of the tall dead pine in the front yard. The bird probed into the cone and treated its plumage with the substance removed from it, digging into the breast and flanks. Suddenly the bird fluffed its belly and fanned its wings and tail for a brief sunbath in Level III (Hauser, 1957). It made one more anting treatment and flew away to feed.

On 15 September 1960 at 08:15 a juvenile male Rufous-sided Towhee, possibly the same individual that anted on 28 and 30 August of this year, anted by the feeder until a Mockingbird *(Mimus polyglottos)* chased it away.

On 28 September 1960 at 10:17 an adult male Red-bellied Woodpecker anted at dead crotched limbs in the ailanthus where I saw a juvenile of the same species anting on 13 June 1960. After each peck into the bark the bird carefully and slowly preened first the bend of the wing, then the breast, shoulders, and primaries. While the bird was anting the sun broke through what had been solidly overcast skies. After carefully dressing the neck and shoulders, the woodpecker leaned back to expose these areas to the sunlight. The bird moved to two other dead limbs and continued pecking and preening with deliberate strokes until 10:30.

On 5 September 1961 at 10:05 a Brown Thrasher anted with several quick thrusts through the primaries, then resumed feeding.

On 13 September 1961 at 13:30 two young Blue Jays anted at low intensity while feeding. One jay chased the other away at intervals.

On 18 September 1961 at 17:45 a molting juvenile Rufous-sided Towhee anted while feeding on the lawn. Only about four or five treatments were made. The anting motion included a swish of the tail to left or right side of the body and a collapse of lower belly plumage to the ground just as the bill, with ant, ran through primaries on the side toward the tail. Potter (pers. com.) has noted that a collapse of belly plumage regularly precedes the anting stroke made by American Robins.

On 9 September 1962 a juvenile Starling anted its primaries at 15:30.

At 08:10 the next day, 10 September 1962, two Blue Jays anted at the ant bed. One bird was especially active, treating only primaries but tumbling over in its enthusiasm. The other bird made a few treatments of low intensity. A Starling and a Mockingbird watched the activity but did not ant.

On 27 September 1962 a Starling, apparently an adult bird, anted on lawn near feeder for about 5 minutes beginning at 16:55. The bird assumed the typical anting posture for each treatment. Appearing to use its wings for support, the bird directed the beak full of ants toward the anal area with forceful sweeps.

October.—On 1 October 1959 at 18:00 one Blue Jay from a flock of eight anted with high intensity and remained in the yard after others left. The bird treated primaries, breast, belly, and crissum, bringing the tail forward inverted beneath the body and using wings for support while treating belly and crissum. Crown feathers were fully raised, but body plumage was not fluffed.

On 4 October 1961 at 17:15 a female Cardinal anted primaries briefly while feeding on the lawn.

On 6 October 1961 at 09:30 a Starling anted while perched alternately on the ground and on a tree trunk, clinging to the bark about 14 inches above ground.

On 9 October 1961 at 17:15 a female Cardinal anted deliberately, treating primaries of one wing four to six times and then treating the other wing. The tail was tucked under body to bird's left throughout the episode.

On 3 October 1962 at 16:05 a male and a female Cardinal, both adults, anted vigorously while sitting on their inverted tails. The male definitely was treating his primaries, but often the thrust of the bill appeared to reach the anal area, which was the location of the wing tip during the episode. While the male exhibited high intensity anting, the female was less vigorous in her treatments, which were mostly confined to the primaries. The treatments continued for 15 minutes. Some ants were eaten, either after a treatment or instead of it; but others were tossed aside after use.

Later the same afternoon (17:20) a male Cardinal anted primaries in a standing position. He was replaced by another male at 17:25. The second male anted vigorously until displaced by a Common ("Yellow-shafted") Flicker *(colaptes auratus)*.

On 26 October 1963 a Blue Jay anted its primaries continuously and excitedly for 8 minutes beginning at 16:50. Cardinals approached within 10 inches and ate some ants. A female flicker edged to within 3 inches of the anting bird, but she left without anting or feeding.

November.—On 13 November 1959 at 15:15 two Blue Jays anted actively until squirrels approached. Both birds flew, but one returned to ant some more. It made one to three jabs at the under side of its primaries with each ant picked up, flicking the wing back to an extra tight position at its side following each treatment. After six to eight treatments the bird moved from the location near the wall to an exposed oak tree root and anted for about 3 minutes.

On 25 November 1961 at 16:40 a Yellow-bellied Sapsucker anointed its breast and wings with a substance removed from the rotting wood of a tall dead pine stump at the shore of Forest Lake.

On 5 November 1963 at 17:10 Derb Carter Jr. called my attention to the behavior of a White-throated Sparrow that had just been chased into the yard by a neighbor's Mockingbird. As soon as the mocker departed, the sparrow dropped to the lawn and immediately began to ant its primaries with quick gestures and a continuous switching of the tail from one side to the other. The bird anted for 5 minutes without pause. When we went to collect specimens, Carter commented on the strong pungent odor of the air around the ant nest.

December.—On 17 December 1959 two Blue Jays anted their primaries with high intensity for 5 to 7 minutes, usually making 3 to 10 treatments of one wing before switching to the other. Although all applications were to the primaries alone, birds still settled back each time with the tail twisted to the side and under the body. Thrusts were directed toward the base of the primaries with the sweep of the bill going only part of the length of the feathers. The bill often held tiny wisps of dried weed or leaf picked up while grasping an ant. Some ants were taken from the top of a plant stalk 3 inches high. The jays ate each ant before picking up the next one. To the best of my knowledge this episode is the only account of anting by wild birds in December in temperate North America.

DISCUSSION

Anting appears to be a widespread and stereotyped form of avian feather maintenance behavior that surely must be advantageous to birds in some manner, although its purpose has not yet been determined. Potter (1970) found no evidence to support once generally accepted hypotheses that birds ant either to control ectoparasites or for the pleasure of self-stimulation. She did find that birds are more likely to ant when they are molting than at any other season of the year. The significance of this seasonal peak of anting activity is unquestionably strengthened by data from Fayetteville.

Species of birds anting.—Potter (1970) listed 21 species of birds known to have anted in the wild in temperate North America. The present paper adds to this list the Mourning Dove, Red-bellied Woodpecker, Red-headed Woodpecker, Yellow-bellied Sapsucker, and White-throated Sparrow. The White-throated Sparrow has long been known to ant in captivity (Ivor, 1943), but I am not aware of any published anting records for wild birds of this species.

Anting by doves and woodpeckers may be more common than the literature suggests. These short-legged heavy-bodied birds do not ant in the classic postures that make the behavior almost unmistakable in passerines. To further complicate matters, woodpeckers have long bills and extremly extensible tongues that make it very difficult to tell what they have picked up and which feathers they are treating, even when the bird is viewed at close range. If woodpeckers ant while perched at the top of a dead tree, their movements may be adequately observed even though collecting the ants or other substance they may have used is completely out of the question. For woodpeckers, under all but the most favorable conditions, the alternate pecking and preening should be accepted as evidence of active anting behavior. Passive anting presents a more difficult field problem because it may be confused with sunbathing. Only exceptionally well documented accounts of passive anting in doves and woodpeckers should be accepted for publication.

Species of ants used.—Table 1 lists the species of ants used in anting episodes at Fayetteville when positive identification could be obtained. *Pheidole morrisi, Pogonomyrmex badius,* and *Crematogaster ashmeadi* represent significant additions to the list compiled by Whitaker (1957). All three of these Myrmicinae possess a functional sting, and Mrs. Whitaker's captive oriole found ants of this subfamily unacceptable for anting. At Fayetteville, however, the Florida harvester ant *(P. badius)* was used by anting birds more frequently than any other identified species. In addition to its sting, this species gives off a pungent odor that may cause birds to select it for anting in spite of the risk of being stung.

Iridomyrmex pruinosus has a vestigial sting and exudes a repugnatorial liquid as do the several Formicinae on my list (*Camponotus* sp., *Lasius* sp., and *Acanthomyops* sp.).

According to Brimley (1938), the Florida harvester ant reaches the northern limit of its range in southeastern North Carolina. This species, along with several others in Table 1, probably has not been mentioned in the literature on anting previously because anting observers have taken very few specimens of ants from the southeastern United States.

Feathers treated.—Weisbrod (1971) states that his captive Blue Jays did not ant the tail or vent region directly. He suggests that published reports of this activity are attributable to observer error. I concede that anting treatments are most often directed toward the wings and that rapid movements make field observations difficult. However, I do not believe there was any observer error in the following episodes: 19 July 1961, molting juvenile Blue Jay, under-tail coverts; 1 August 1960, juvenile Blue Jay, belly; 28 August 1960, molting juvenile Rufous-sided Towhee, vent; 27 September 1962, Starling, anal area; and 1 October 1959, Blue Jay, belly and crissum.

Sometimes anting birds sit on their inverted tails with the wing tip touching the crissum so that the full sweep of the bill along the under side of the primaries ends at or near the vent. In these cases one cannot determine whether the treatment is intended for the wing, the vent, or both. For an account of this type of anting, see the description of Cardinals anting on 3 October 1962 in the present paper. At other times the bill does not touch the wing at all, and the thrust is made directly toward the crissum. Potter (1970 and pers. com.) reports having seen several birds bring the tail forward between the legs and thrust the bill, without touching the wings or breast, into the crissum with such vigor that they tumbled over backwards.

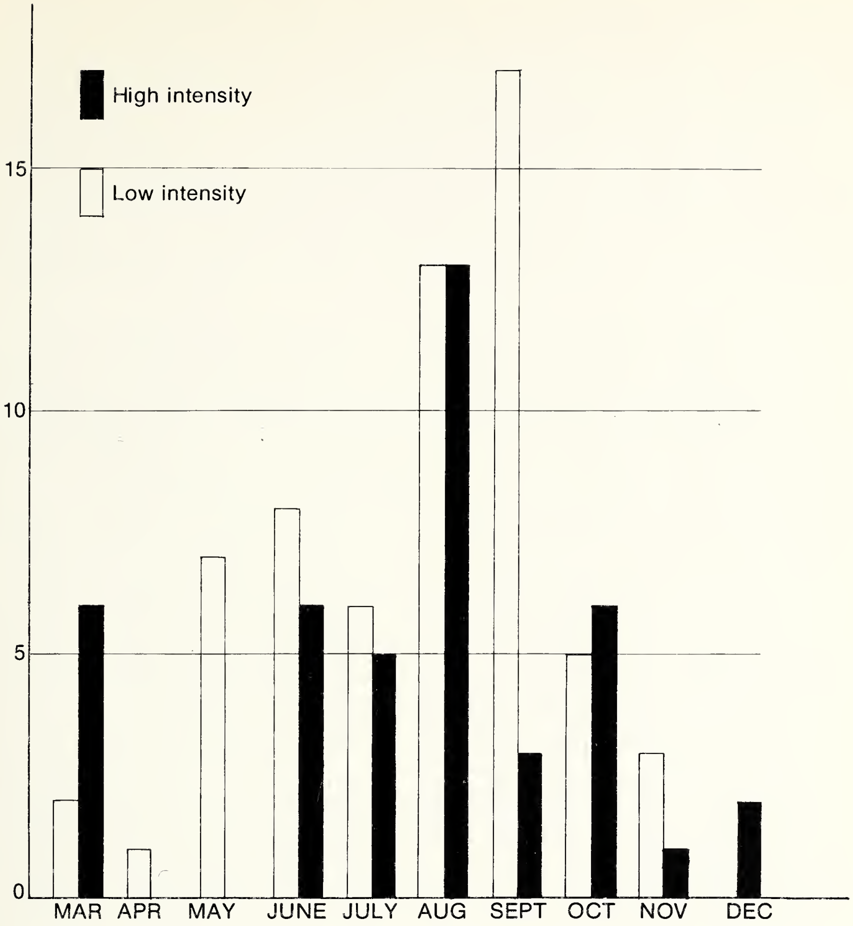

FIGURE 1. Monthly distribution of high and low intensity anting by 104 wild birds at Fayetteville and Zebulon, N.C., 1958-1968.

While there may be a few inaccurate sight records in the literature, anting treatments directed toward the anal and caudal feather tracts have been described by too many reliable observers to be dismissed for want of motion pictures.

Anting and weather conditions.—Potter (1970) reports a correlation between heavy or prolonged rainfall and high intensity anting behavior. Weather data in Table 1 also suggest a relationship between anting and rainfall. Of the 39 episodes for which I recorded weather data, 25 (64%) took place within 24 hours after rainfall, during misty rain, or under cloudy skies. I have weather data for 13 of the 17 high intensity anting episodes. Eight of the 13 (62%) took place within 24 hours following heavy rainfall, one during misty rain, three when skies were overcast, and only one under clear skies. Thus 92% of the high intensity anting episodes for which I can supply weather data took place during periods of high humidity. While low humidity does not preclude either anting

(Potter, 1970) or sunbathing (Hauser, 1957), high humidity does appear to increase significantly the frequency and intensity of both activities in wild birds.

Diurnal peak.—The 45 anting records for which I noted the time of day are distributed as follows: hour beginning at 08:00, 6 episodes (4 of these high intensity); 09:00, 6 (1); 10:00, 2; 11:00, 2; 12:00, 5 (3); 13:00, 5 (1); 14:00, 3 (1); 15:00, 3; 16:00, 6 (4); 17:00, 6 (1); and 18:00, 1 (1). Potter (1970) found birds more likely to ant in the early morning hours before 10:00 than at any other time of day. She noted lesser peaks of anting activity in late afternoon and at midday. My hours of observation (08:00 to 18:00) greatly reduced the probability of my seeing early morning anting, but my data still indicate the same three diurnal peaks of anting activity. The lull between 10:00 and 12:00 is particularly noticeable, this being a 2-hour period when I saw only four episodes and no high intensity anting at all.

Seasonal peak.—Potter (1970) noted an "abrupt onset of major anting activity at mid-May, continuing through June and July to a peak in August, declining slowly in September, and virtually stopping the first week in October." Records from Fayetteville (Table 1) generally support this description of the anting season. I saw anting only once earlier than 14 May, and I noted only five episodes later than 9 October. One of these was extremely late and appears to be the only published record of anting by wild birds during the month of December in temperate North America. It extends the known dates of anting in North Carolina from 3 March (Potter, 1970) to 17 December.

One major discrepancy exists between my data from Fayetteville and those from Zebulon (Potter, 1970). I found more anting in June, July, September, and October than in August. A comparison of the species recorded anting at the two localities offers a plausible explanation. One-fourth of the birds anting at Fayetteville were Blue Jays, but only 5 of the 45 anting at Zebulon were of this species. American Robins constituted over one-third of all the birds Potter saw anting, while only 5 of the 59 anting at Fayetteville were of this species, two of these having been seen at the Stewman residence. My yard does not attract the flocks of molting juvenile robins that Potter found prone to ant following heavy rainfall in August.

Of the 59 birds that anted at Fayetteville, 49 (83%) did so between 14 May and 9 October. Of the 45 birds anting at Zebulon (Potter, 1970), 37 (82%) did so between the same dates. Thus the mid-May to early October anting season appears to be valid for both localities, although the peak may vary according to seasonal weather conditions, local habitat, and the species of wild birds most frequently present in the study area. Fayetteville and Zebulon data combined (Figure 1) indicate a peak in late summer (August and September), with a greater proportion of high intensity anting in August than in September.

Anting and the cycle of molt.—All Fayetteville anting records were accumulated before I learned that Potter (1970) had detected a relationship between the peak of anting activity and the peak of postnuptial and postjuvenal molts in wild birds. Even though I made no consistent effort to note plumage conditions in anting birds, I can offer some additional evidence in support of the theory that birds ant to soothe skin irritated by new feather growth (Southern, 1963; Potter, 1970).

The species seen anting most frequently at Fayetteville is the Blue Jay. My 10 episodes of anting by jays are distributed as follows: 31 May, 19 July (molting juvenile), 1 August (juvenile, high intensity), 22 August (juvenile, high intensity), 10 September (2 unaged birds, high intensity), 13 September (2 juveniles), 1 October, 26 October (unaged bird, high intensity), 13 November (2 unaged birds), and 17 December (2 unaged birds, high intensity). Bent (1946) states that a partial postjuvenal molt takes place "when the bird is between 50 and 90 days out of the nest." According to the same source, adult Blue Jays have a complete postnuptial molt between June and September. Although I detected postjuvenal molt in only one of the young birds anting at Fayetteville, individual jays probably can be found in various stages of molt from mid-July through late autumn, the species being double-brooded in our region (Sprunt and Chamberlain, 1949). Potter (pers. com.) has banded one adult and one young of the year that were just beginning to molt in early October. Thus late October to mid-December anting by Blue Jays is not inconsistent with a probable relationship between anting and molting.

I have seen Rufous-sided Towhees anting on four occasions: 28 and 30 August 1960 (juvenile, same bird both dates), 15 September 1960 (juvenile, possibly same bird that anted in August), and 18 September 1961 (juvenile). In all four instances the birds were obviously undergoing the postjuvenal molt.

Cardinals anted at Fayetteville on 18 June (2 episodes, high intensity), 2 September, 3 October (2 episodes), 4 October, and 9 October. Potter (pers. com.) reports adult Cardinals molting at Zebulon as early as mid-May and juveniles molting from August through October. Elizabeth Teulings (pers. com.) says that some Cardinals are still molting in early December.

Anting and sunbathing.—In a previous paper (Hauser, 1957) I described voluntary sunbathing (deliberately undertaken by the individual bird) and compulsory sunbathing (unpremeditated and irresistible to the bird). Voluntary sunning is used in conjunction with other normal feather maintenance activities, but the compuslory response to sunlight under extreme conditions of heat and humidity is usually followed by immediate flight to shade. Four levels of response to sunlight were noted, ranging from Level I (contour feathers erected, wings drooped, tail spread) to Level IV (exaggerated sun position with bird apparently near collapse).

During 6 years of regular watching for anting at Fayetteville, I continued to note birds' sunbathing activites. Some winter residents sunbathe in late fall and from February until migration in April or May. Permanent resident species may sun from March to October, but they do so most frequently in June and July.

I have recorded sunbathing for the Red-bellied Woodpecker at Fayetteville from 2 May (1961) through 28 September (1960) and anting from 23 May (1962) through 28 September (1960). A young Red-belly both anted and sunned on 5 September 1960, and an adult engaged in both activities on 28 September 1960. A molting juvenile Rufous-sided Towhee that anted with high intensity on 28 August 1960 also sunbathed. I have recorded no other instances when an anting bird also sunned.

While both anting and sunbathing frequently occur following heavy precipitation and the two activities are obviously not mutually exclusive, a sharp increase in one does not presage a similar increase in the other. I have recorded both anting and sunning on the same days only 11 times, three of these being represented by the two woodpeckers and one towhee that combined the two activities. Six of the other eight times the sunbathing was intensive, involving many individuals of several species on a single day or occurring frequently on several successive days. These six dates were 31 May 1961, 14, 15, and 23 May 1962, and 9 and 27 July 1962. On all six occasions the accompanying anting was of low intensity.

Although there are not yet enough data to make a positive statement regarding the relationship of anting to sunbathing in birds, my records indicate that permanent resident species prefer sunbathing to anting from April through July and that more individuals of more different species sun in June and July than in any other months of the year. The August-September peak of anting coincides with a period of declining frequency of sunbathing, though the latter activity certainly is not unusual in late summer.

SUMMARY AND CONCLUSIONS

In the course of 6 years of regular watching for anting and during subsequent random observations, I witnessed 48 episodes of anting by 59 wild birds of 13 species at Fayetteville, N.C. These 13 species include five not previously reported as anting in the wild. Among the ants used were three species from the subfamily Myrmicinae that possess functional stings and were previously thought to be unacceptable for anting purposes.

Anting data from Fayetteville correspond very closely to data from Zebulon, N.C. Both Potter (1970) and I found major anting activity to begin at mid-May and to end in early October with the peak in August and September, although occasional episodes occur as early as 3 March (Zebulon) and as late as 17 December (Fayetteville). Records from Fayetteville offer additional evidence that birds are more likely to ant while molting than at other times of the year.

Although on occasions birds may sunbathe in conjunction with anting, I find that sunning occurs most frequently among permanent resident species during the two months immediately preceding the August-September peak of anting. Additional records of both anting and sunning with adequate details on plumage and weather conditions are required before the significance of the seasonal fluctuations in relative frequency of these two behavior patterns can be understood. Future students of either anting or sunbathing in birds should carefully consider the relationship of these two activities to each other and to the cycle of molt.

ACKNOWLEDGEMENTS

I am indebted to M.R. Smith, U.S. Department of Agriculture, William G. Carter, Department of Zoology, Oklahoma State University, and Robert E. Gregg, University of Colorado, for species identification of ants; and to Lovie Whitaker for her interest and comments about early anting incidents in my yard.—DORIS C. HAUSER, 6 July 1964.

Barbara Hauser Bryan, though only a casual bird watcher, recognized the value of her mother's ornithological data and took the initiative in arranging for the posthumous publication of the anting paper. Brian Potter prepared the graph, and Elizabeth Teulings supplied banding records of birds in molt. To all these people I am sincerely grateful.—ELOISE F. POTTER, 15 July 1972.

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CBC Roundtable

... with Louis C. Fink

The National Park Service—conscious of the pressure on our National Parks—has published a list of "lesser known areas of the National Park System," obviously inviting their use. For North Carolina, the Service recommends Guilford Court House National Military Park in Greensboro and parts of the Blue Ridge Parkway, embracing several large recreational areas. No Parks are suggested for South Carolina.

Data on Red-cockaded Woodpeckers Needed

A survey is being conducted on the range and abundance of the Red-cockaded Woodpecker *(Dendrocopos borealis)* in North Carolina. Information on the exact location of nesting colonies is needed by 1 May 1974; information on abandoned colonies and sight records will also be appreciated. Send data to J.H. Carter III, Zoology Department, N.C. State University, Raleigh, N.C. 27607.

Chickadee Acrobatics

Mary L. Lee, P.O. Box 202, Townsend, Tennessee 37882, asks our readers to compare notes or explain the acrobatics of a chickadee at her feeder in 1967—which she has never seen before or since. The temperature was well below zero. The chickadee landed on a loose wire above a bird feeder, made a somersault, landed upside down on the edge of the roof of the feeder, took another somersault, and landed on a rod at the base of the feeder. He repeated this feat a dozen times.

Chickadees thrive in cold weather, and it may be guessed that this bird was after food. Edward Howe Forbush noted in "Birds of America" (Garden City Publishing Co., Inc., N.Y., 1936) that the Chestnut-backed Chickadee often turns "an occasional half-somersault in air when pursuing some winged insect."

Recent Publications by CBC Members

Several CBC members have recently published papers in journals other than *Chat.* The April 1973 *Auk* includes "Estimating Numbers in a Roosting Congregation of Blackbirds and Starlings" by Paul A. Stewart of Oxford, N.C., and "Growth and Development of Long-billed Curlew Chicks" by Dennis M. Forsythe of Charleston, S.C. Dr. Stewart's paper is based on studies made at the infamous blackbird roost near Scotland Neck, Halifax County, N.C. By comparing the amount of feces dropped overnight by individual birds caught as they approached the roost and held in cages to feces samples caught on the ground at measured locations over the site, he estimated the roost to contain 2,294,713 birds. The July 1973 *Auk* carries "The Daily Rhythm of Hawk Migration at Cedar Grove, Wisconsin" by Helmut C. Mueller of Chapel Hill, N.C., and Daniel D. Berger.

Dr. Mueller published "Zone-tailed Hawk and Turkey Vulture: Mimicry or Aerodynamics?" in the Summer 1972 *Condor.* This same issue contains Dr. Stewart's paper "Change of Winter Feeding Sites by Individual Brown-headed Cowbirds." "Mortality of Purple Martins from Adverse Weather" by Dr. Stewart appears in the

Winter 1972 *Condor.* Relatively large amounts of unused food in the gizzards of the dead martins suggests that exposure to low temperature was the cause of death rather than starvation.

Bird-finding in the Carolinas

A newcomer to the Carolinas (like this contributor) or a visitor has trouble finding the choice spots for bird-study. Most experienced birders are too busy to give directions by mail and direct the inquirer to Occoneechee Neck or Wilmington or Southern Pines or Lake Raleigh. These are big areas and the newcomer does not know where to begin.

In the hope that some good spots may be pinpointed, readers are asked to submit brief directions for bird-watching in and around their cities. The program was started some time ago, but not continued.

If you are generous enough to provide directions in your area, please assume that the reader has a car and a city map. Avoid private places where visitors are not welcome. Avoid spots which might be dangerous to a man alone. (A woman is never encouraged to go in the field alone!)

Here's a sample:

ROCKY MOUNT, N.C. – City Park on Sunset Avenue has a lake with a resident Canada Goose and Whistling Swan. At least two pairs of House Wrens nested in broken lamp posts. Brown-headed Nuthatches in mature pines. Across Sunset Avenue is Sunset Park, with a colony of Barn Swallows; at the northeast end of the Park is a patch of woods and a trail along the Tar River. Follow the "Hospital" signs to Nash General Hospital. Stop to investigate Stony Creek on the way; a trail by the bridge leads into the woods with a good population of summer residents. Behind the doctors' office building at the hospital are three ponds, with kingfishers, breeding Green Herons, and an occasional glimpse of a Sharp-shinned or Red-tailed Hawk.

On Falls Road at the Rocky Mount Mills is a parking space; the trail here goes along the river for half a mile: thrushes, chickadees, Red-bellied Woodpeckers, flycatchers, Rusty Blackbirds, and another summer colony of Barn Swallows.

The new reservoir is reached by driving west on Route 97 past the airport. Three access roads to the dam and reservoir are marked with large signs. Yellow-billed Cuckoos appear and at least an occasional late-summer egret.

Seven Bridges is a swamp area east of Rocky Mount in Edgecombe County. Drive east on Route 97 to Holloman's Store, and turn left of Route 1400. (The sign points to Gethsemane.) Turn right on Route 1404; a paved road includes a series of bridges. You can stop at each bridge and look into the cypress and other trees for migrating warblers. On the way, open fields produce meadowlarks, phoebes, Horned Larks, and pipits in season.

Swallow-tailed Kite Records Requested

John Emmett Cely, 5140 Furman Avenue, Columbia, S.C. 29206, is trying to determine the breeding range, abundance, and distribution of the Swallow-tailed Kite in the Carolinas and Georgia. He would appreciate receiving full details of any records you may have, particularly breeding records.

General Field Notes

JAMES F. PARNELL, Department Editor
Department of Biology, University of North Carolina at Wilmington,
Wilmington, N.C. 28401

JULIAN R. HARRISON, Associate Editor
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Mississippi Kites in Northeastern North Carolina

HARRY E. LeGRAND JR.
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J. MERRILL LYNCH
539 Henry Street, Roanoke Rapids, N.C. 27870

26 July 1973

Between May and July of 1973, Mississippi Kites *(Ictinia misisippiensis)* were found at two sites in the coastal plain of northeastern North Carolina. Because of the species' rarity in the state, the authors feel documentation of these records is warranted.

On 6 May LeGrand was birding in the Johnston Farm section of Occoneechee Neck in SW Northampton County, N.C., as a participant in the Roanoke Rapids spring count. At approximately 14:00 he saw a single Mississippi Kite flying and soaring over a pasture pond and adjacent riverbottom hardwoods for a total of 2 minutes. The bird was first seen flying about 200 to 250 feet overhead and it then circled four or five times at a height of approximately 200 feet from the ground. Although the hazy sky and white background of the clouds made observations of the bird's coloration difficult, LeGrand was close enough to study most field marks and the distinctive kite silhouette. The tail was black, the undersurface of the wings dark, the underparts gray without any bars or streaks, indicating adult plumage.

On 12 May Lynch saw a kite, apparently the same bird, soaring and gliding with a soaring "column" of Black and Turkey Vultures at the same location described above. From a distance of 500 to 1,000 feet he watchedthe comparably much smaller kite spiral upwards with the vultures and then glide downward on a straight course almost to tree level, then angle sharply upward once more, flapping its wings only occasionally. He observed the long, slender, pointed wings which were reminiscent of a falcon, and the long, black tail which it fanned out occasionally. The kite appeared to be about the size of a crow and its overall slender proportions were distinctive. It was studied for about 4 minutes before it disappeared beneath the forest canopy.

The kite was last seen on 2 June, almost a month after LeGrand's initial sighting.

On 4 July 1973 Lynch sighted a second individual at Cutawhiskie Creek, a channelized stream about 8 miles W of Ahoskie in SW Hertford County, N.C. This bird was seen at about 17:15 under ideal viewing conditions, gliding overhead no more than 250 feet from the ground. All field marks were checked, including the distinctive kite shape and manner of flight, along with the grayish underparts. This bird was nearly identical to the Occoneechee Neck individual except for a barred tail, a mark indicative of a subadult. Interestingly, this location is only about 21 miles E of the previous sighting.

Pearson, Brimley, and Brimley (*Birds of North Carolina,* revised by Wray and Davis, 1959) list only three records for the state: one killed in Cherokee County on 26 May 1893, another shot in the area soon afterward, and one at Southern Pines on 20 October

1949. A fourth record is a bird sighted on 15 June 1972 by Lynch and Chris Marsh, also at Occoneechee Neck and not more than ¼ mile from the 1973 sightings (*Chat,* 36:112). The presence of two Mississippi Kites in adjacent counties in North Carolina suggests that this species is not so rare as the paucity of recent records would seem to indicate. The species apparently is undergoing a significant range expansion and population increase in the Mississippi Valley region (*American Birds,* 25:824; 26:830), and this could be a factor in dispersal into peripheral regions.

Third Sight Record of the Goshawk for North Carolina

HELMUT C. MUELLER
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11 April 1973

On 24 December 1972 at approximately 13:30, I was eating lunch in my home about 4 miles W of Chapel Hill, N.C. About 15 Evening Grosbeaks and a number of other birds were at the feeder outside my window some 6 feet away. The birds suddenly flew away in apparent panic. I immediately moved to the window and looked for a hawk. After about 30 seconds I saw a large, grayish Accipiter fly for about 150 feet to another perch. Its size and manner of flight led me to believe that it was a Goshawk. I quickly found my 10 x 50 binocular and carefully went out on our patio. I was able to view the bird for a few seconds at a distance of 150 feet, noting the gray striations on the breast and the long tail before it flew to another perch about 250 feet away. I was unable to obtain a good look at the head of the bird and thus did not note the stripe over the eye. The relatively small size of the bird leads me to suspect it was a male, and the plumage was clearly adult. (See Mueller and Berger, *Auk,* 84:183-191, 1967; and *Auk* 85:431-486, 1968.)

I have seen several hundred Goshawks previously, most of them in Wisconsin, and have live-trapped and banded about 100 individuals. In my 20 years of observing hawk migration at Cedar Grove, Wisconsin, I have become about as proficient in identifying Accipiters as any ornithologist I have known. I am confident that the Chapel Hill bird was a Goshawk.

Personal communications with D.D. Berger and other hawk watchers and banders indicate that the 1972-73 flight may well be one of the greatest southward invasions of Goshawks in recorded history. Unusual numbers of Goshawks were seen in the Great Lakes region, the Pennsylvania mountains, and even at Cape May, New Jersey. Adults were considerably more common than juveniles at all observation points. Thus, the appearance of an adult Goshawk in the piedmont of North Carolina in this winter is perhaps not surprising.

There are two previous sight records of this species in North Carolina, both from the mountains in the southwestern corner of the state (Enloe, *Chat,* 34:79-80, 1970; Pratt, *Chat,* 35:1-4, 1971).

[Dept. Ed.—With the recording of the third occurrence of this northern hawk, it can be placed on the official North Carolina list.]

A Pileated Woodpecker at Bodie Island, N.C.

JOHN S. WRIGHT
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24 April 1973

At approximately 09:30 on 21 April 1973 while birding near the Bodie Island lighthouse I heard what sounded like the call of a Pileated Woodpecker *(Dryocopus pileatus).* Within a few seconds the woodpecker flew from a nearby stand of pines and came within 40 yards of me as it flew away. A quick look through 7X binoculars confirmed all field marks of the Pileated Woodpecker. This sighting appears to be the first for this species from the heavily birded Bodie Island-Pea Island section of the North Carolina coast. It is noteworthy because the surrounding area is apparently almost completely unsuitable for the Pileated, consisting only of dune vegetation, marshes, and maritime shrub thickets. The Pileated flew from an acre-sized plot of small to medium-sized planted pines which is surrounded by younger planted pines and shrubs.

The Pileated Woodpecker has been reported previously from Wanchese, N.C., on Roanoke Island, approximately 4 miles away across Roanoke Sound and also at Kitty Hawk, 18 miles to the north. Both of these sites have better habitat for this woodpecker.

Brown Thrasher Encounter with Snake

M. RALPH BROWNING
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24 July 1973

The Brown Thrasher *(Toxostoma rufum)* eats primarily insects and larva but has been reported to eat lizards, salamanders, and tree frogs (Beal, McAtee, and Kalmbach, 1916, *in* Bent, USNM Bull. 195, p. 364, 1948). On 19 May 1973 I observed an adult Brown Thrasher striking a small snake on the Chapel Hill campus of the Univeristy of North Carolina. The bird was standing on the ground where the snake had been discovered in the leaf litter. I found that the snake had been decapitated and was wriggling vigorously. The body was approximately 8 inches in length and ½ inch at its largest diameter. The head could not be found. While I was examining the snake, an immature Brown Snake *(Storeria dekayi)*, the thrasher flew off about 15 feet and made throaty *chuck* sounds, the only vocalization heard during this observation.

After 30 seconds I moved 20 feet away, and the thrasher returned to the snake. The bird immediately began striking the snake. The bill was maintained at 90 degrees to its body axis, and its head was raised about 2 inches above the snake before delivery of each blow. The body pivoted at the acetabulum; otherwise, there was no movement. After about a minute of jabbing, during which time the snake ceased movement, the thrasher flew about 40 feet with the snake in its bill. For another minute the thrasher pecked at the snake and on three occasions threw the body about 6 inches above the ground. The thrasher spent about a quarter of this time peering at the snake. Pecking, throwing, and peering were accomplished using primarily the neck with little body movement. During the next 3 minutes the thrasher attempted to swallow the prey. Wing flashing was not observed (see Potter, *Chat,* 32:103, 1968).

I was unable to confirm whether the thrasher succeeded in swallowing the snake, because a car stopped nearby and the bird flew out of sight. However, as the thrasher flew, I could not see the snake, and a thorough search for the snake was negative. I remained in the vicinity for another 3 minutes watching apparently the same bird forage in the forest litter.

The thrasher and *Storeria dekayi* frequent the same habitat. This report indicates that the opportunistic feeding habits of the Brown Thrasher allow it to include small snakes in its diet.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514

(All dates 1973 unless otherwise stated)

COMMON LOON: A late spring straggler was present at Roanoke Rapids Lake near Roanoke Rapids, N.C., 3 June through 8 June, Merrill Lynch.

CORY'S SHEARWATER: Summer visitors were fairly common in coastal waters off the Carolinas in late June and July. Peter Laurie tallied from 5 to 20 birds of this species on five pelagic cruises to the Gulf Stream off Charleston, S.C., between 20 June and 25 July. On 28 July, D.M. Forsythe, T.A. Beckett and S.A. Gauthreaux, cruising 7 to 9 miles off Charleston, saw two Cory's Shearwaters, one of which was collected. Cruise parties led by Paul DuMont recorded 69 in waters up to 50 miles off Morehead City, N.C., on 28 July and 20 the following day off Hatteras, N.C.

GREATER SHEARWATER: Several observers reported finding some dead or dying birds washed ashore in the Morehead City, Wilmington, and Charleston areas during June, but no major die-off was indicated.

AUDUBON'S SHEARWATER: Paul DuMont and party recorded 40 during an offshore cruise up to 90 miles out of Hatteras, N.C., on 29 July. According to other reports, good numbers were also present in waters off Morehead City, Wrightsville Beach and Charleston during July.

WILSON'S STORM-PETREL: This species was common offshore in late July as indicated by counts of at least 75 off Hatteras on 25 July by P.W. Smith, 63 off Morehead City on 28 July by P.G. DuMont et al., and 25 off Charleston on 28 July by D.M. Forsythe and party.

BROWN PELICAN: On Charleston's Deveaux Bank, Brown Pelicans enjoyed their most successful nesting season in recent years with an estimated 1,150 young produced, Ted Beckett.

GANNET: An immature was sighted on 24 June at Hatteras Island, N.C., by Paul Buckley. The observer reported the bird was seen so well as to rule out any thought that it might have been a booby.

MAGNIFICENT FRIGATEBIRD: One was seen at Edisto Beach, S.C., on 12 June by Norman Chamberlain; one near Southport, N.C., on 21 June by Robert Hader and Robert Soots; and one at Atlantic Beach, N.C., on 2 August by Jack Potter.

LOUISIANA HERON: One was a locally unusual summer visitor at Lake Wheeler near Raleigh, N.C., on 28 July, Chris Marsh and David Whitehurst.

LEAST BITTERN: Capture of a still-flightless juvenile near Gaston, N.C., on 25 July by Merrill Lynch provides the first reported evidence of nesting along the Roanoke River in Northampton County.

MUTE SWAN: A visitor was found unexpectedly at Lake Julian near Skyland, N.C., on 14 April by Robert Ruiz, Wendell Cisco, and Roland Sargent.

RING-NECKED DUCK: A 24 July occurrence was noted at Raleigh, N.C., where a single bird was seen at Lake Raleigh by Robert Hader.

KING EIDER: Bruce A. Mack has reported a previously unpublished sighting of a female King Eider off the Kitty Hawk, N.C., fishing pier on 4 January 1970, a close and detailed observation.

RUDDY DUCK: A late lingerer was seen at Lake Wheeler near Raleigh, N.C., on 25 June by David Whitehurst and Chris Marsh.

HOODED MERGANSER: Two juveniles were seen in a wooded swamp near North Wilkesboro, N.C., on 7 May by Wendell Smith, strongly indicating a rare local breeding record.

SWALLOW-TAILED KITE: One was seen well north of the species' known summer range near Rock Ridge in Wilson County, N.C., on 17 June by Henry Haberyan.

COMMON GALLINULE: An adult was found at a beaver-pond near Weldon, Halifax Co., N.C., on 24 July by Bill Collier and Merrill Lynch, but no positive evidence of local breeding was reported.

BLACK-BELLIED PLOVER: One was well seen at Asheboro, N.C., on 9 July by Harry LeGrand, an unexpected inland summer record.

LONG-BILLED CURLEW: One was observed on tidal flats at Ocracoke on the North Carolina Outer Banks 30 July by Robert Ake and Richard Rowlett.

WHIMBREL: Several were present at Cape Romain N.W.R. on the South Carolina coast on 15 July, Ted Beckett. Two were seen at Charleston on 28 July by Dennis Forsythe.

WESTERN SANDPIPER: Robert Hader observed three early inland transients at Lake Raleigh in Wake County, N.C., on 24 July.

MARBLED GODWIT: Uncommon late-June occurrences were noted on the North Carolina coast where two birds were found at Rich's Inlet on 22 June by Robert Hader and Robert Soots, and three at Portsmouth Island on 23 June by P.A. Buckley, F.G. Buckley, and J.S. Weske.

AMERICAN AVOCET: Six were seen 19 July at the Citadel in Charleston, S.C., by Dennis Forsythe; and one was found at Carolina Beach, N.C., on 21 July by Ricky Davis.

WILSON'S PHALAROPE: A rare inland visitor was present at Raleigh, N.C., 28 and 29 July. The bird was discovered at Lake Raleigh by Chris Marsh and David Whitehurst and also seen by Harry LeGrand and Robert Hader.

BONAPARTE'S GULL: An individual in winter plumage was well seen on 10 March near Greenlee in McDowell County, N.C., by Mr. and Mrs. Dallas Hutcheson and Joseph Hall. This is an early date for a spring migrant to be seen in the mountain region. An unusual summer occurrence was recorded at Atlantic Beach, N.C., where a single bird was seen on three occasions between 10 and 21 July by John Fussell.

SOOTY TERN: An adult was observed resting on the beach at Hatteras Inlet on the North Carolina Outer Banks on 24 June by Paul Buckley and party.

BRIDLED TERN: This tropical species was seen in significant numbers offshore in late July by several parties. At least three were observed 25 miles SE of Hatteras on 25 July by P.W. Smith. Peter Laurie reported seeing one within 50 feet of his boat 55 miles SE of Charleston on 25 July. Counts of 5 and 12, respectively, were recorded in the area of the Gulf Stream on 28 July off Morehead City and on 29 July off Cape Hatteras by Robert Ake, Paul DuMont, Richard Rowlett, et al.

BLACK TERN: An early migrant was seen on 22 June at Rich's Inlet near New Topsail Beach, N.C., by Robert Soots and Robert Hader. On 26 June another was seen at Bird Shoal near Morehead City, N.C., by John Fussell.

BLACK-BILLED CUCKOO: One was seen on 17 June near Raleigh by David Whitehurst and Chris Marsh.

GRAY KINGBIRD: One was well observed at the Buxton Woods Nature Trail, Cape Hatteras, N.C., on 18 May by Richard Rowlett, William Blakeslee, and Harold Wierenga.

WILLOW FLYCATCHER: One pair nested this summer near Lake Raleigh in Wake County, N.C., where a nest with two young was found by Chris Marsh on 8 July. Raleigh is the second locality in North Carolina where this species has been found breeding, the other location being North Wilkesboro.

CLIFF SWALLOW: Two were seen among an early fall flight of Tree Swallows and Bank Swallow at Knotts Island, Currituck County, N.C., on 29 July by Gilbert Grant.

BEWICK'S WREN: One was present and singing on Long Hope Creek in Ashe County, N.C., on 26 July, Robert Teulings.

VEERY: A 3 August sighting of an individual at Valhalla Fish Hatchery, Oconee County, S.C., was a notably early fall record, Dennis Forsythe.

BLACK-AND-WHITE WARBLER: An uncommon local summer occurrence was recorded in Wake County, N.C., where a male was seen and heard in the northern sector on 4 July, and again on 21 July at the same location by Harry LeGrand.

Merrill Lynch reported probable nesting in Hoggard Swamp near Windsor in Bertie County, N.C., where a male was found singing on territory in mid-July.

SWAINSON'S WARBLER: Four singing males were noted in Kitty Hawk Woods, Kitty Hawk, N.C., on 3 June by Gilbert Grant. Another was also found near Grandy, N.C., by the same observer on that date. Elsewhere, an individual was heard singing on Deep Creek west of Aberdeen, N.C., 4 June by Jay Carter. One was also heard near Raemon in Robeson County, N.C., by Carter on 16 June; and one was seen and heard on the latter date on Swift Creek near Raleigh by Harry LeGrand.

WORM-EATING WARBLER: A singing male was found by Merrill Lynch at White Oak Pocosin in western Gates County, N.C., on 14 June at the same site one was seen a year ago (see *Chat.* 36:115).

MAGNOLIA WARBLER: An early fall migrant was closely observed at Raleigh on 29 July by David Whitehurst.

NORTHERN WATERTHRUSH: An early transient was seen on 3 August at Valhalla Fish Hatchery in Oconee County, S.C., by Dennis Forsythe.

AMERICAN REDSTART: Five males and two females were seen in Carteret County, N.C., south of Lake Ellis on 22 May by John Fussell. Their territorial behavior strongly indicated the likelihood of nesting, but a well-documented breeding record for the county has not yet been established.

WESTERN TANAGER: A fall, 1972, record not previously noted was the presence of a single bird in female plumage at Rocky Mount, N.C., 30 November through 8 December. Beverlie and Beryl Joyner submitted photographs of the bird at their feeder.

SCARLET TANAGER: The following observations of summer residents were reported by Merrill Lynch from the northeastern North Carolina coastal plain: a male in White Oak Pocosin in western Gates County 14 June; another male near Tillery in Halifax County 24 June; two males along Cutawhiskie Creek in southwestern Hertford County 4 July; and a male and female in Hoggard Swamp near Windsor, Bertie County, on 11 July.

PAINTED BUNTING: A male was seen and another was heard singing at Tarboro in Egdecombe County, N.C., on 9 May by Louis Fink.

HOUSE FINCH: Single males were seen as late as 2 June at Winston-Salem (Robert Witherington, Ramona Snavely) and Greensboro (Rose Avery), and another at Greensboro 5 July (Dot Garrett). No evidence of nesting has been indicated.

PINE SISKIN: Two lingered at Winston-Salem until 24 June, Royce Hough.

PINE GROSBEAK: Harold Gwinner of Franklin, N.C., reported seeing two males and three females at his feeder on 4 January. The birds were under close observation for several hours, permitting careful identification with reference to Peterson's *Field Guide.* A pair were seen again at the feeder on 5 March.

COMMON REDPOLL: Two were present at Harold Gwinner's feeder at Franklin, N.C., on 5 March. Mr. Gwinner observed the birds at 20-foot range for an hour as they fed. A third individual of paler coloring, possibly a Hoary Redpoll, was seen with the others.

WHITE-THROATED SPARROW: One was a daily visitor 20 June through 26 June at Betty Davis' feeder in Rocky Mount, N.C. The bird did not seem to be sick or injured.

SONG SPARROW: A pair with nest and eggs was found at Crystal Lake near Durham, N.C., on 18 May by Robert Ridgely, and a singing male was noted in downtown Durham on 27 July by James Pullman. At Raleigh, two were seen and heard in a downtown commercial area on 19 June by Robert Teulings. The species also appears to be becoming established as a summer resident at Roanoke Rapids, N.C., where singing birds were present in two residential areas in July, Merrill Lynch.

Correction: Due to a clerical error by the Department Editor, the dates for a late occurrence of a Purple Sandpiper at Fort Macon, N.C. (Chat, 37:86) were incorrectly reported as 26-27 May. The bird was found on 17 May by Robert Hader.

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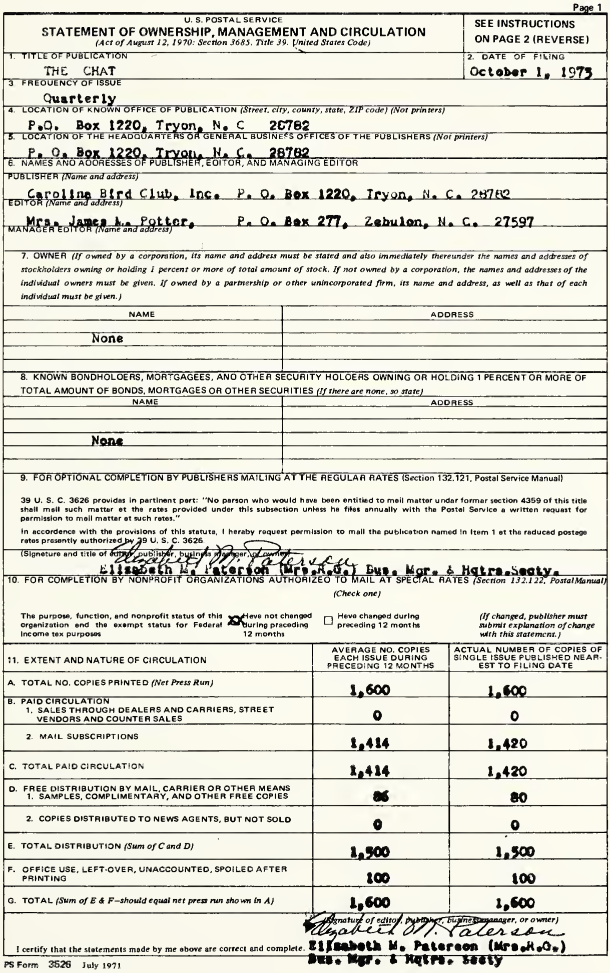

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INC.

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Bulletin of the Carolina Bird Club, Inc.

Vol. 38 March 1974 No. 1

The Chat

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OUR COVER—A male Rufous-sided Towhee poses for photographer James F. Parnell.

SUMMER BIRD RECORDS FROM ASHE AND ALLEGHANY COUNTIES, NORTH CAROLINA

CHRIS MARSH, HARRY LeGRAND JR., AND WILLIAM BROWN JR.

Ashe County lies in the northwest corner of the state with Alleghany County due east of it. A majority of the records given here are from the Chestnut Hill Community, which is 4 miles S of the North Carolina-Virginia border. The region lies on a plateau of rolling hills having an average elevation between 2,000 and 2,700 feet. The North and South Forks of the New River join just north of this area, then flow into Virginia, and eventually into the Ohio River. The elevation of the riverbeds is about 2,500 feet. The New River watershed includes nearly all of Ashe County, and due to a proposed dam site downstream that would submerge the Chestnut Hill area, much of the habitat is abandoned farmland. Scattered stands of white pine (*Pinus strobus*) remain on hilltops. while mainly mature sycamore (*Platanus occidentalis*) and balm of Gilead (*Populus gileadensis*) line the riverbanks. All dates mentioned in this article are 1972 unless otherwise stated.

PEREGRINE FALCON: (*Falco peregrinus*): On the morning of 1 July while driving along the Blue Ridge Parkway in Alleghany County near milepost 232 (elevation 3,500 feet), Ross Silcock and Chris Marsh spotted two large falcons flying across the road. The first bird caught an updraft and then dipped below the treeline pursued by the second bird. Silcock observed the upperparts of the second bird to be metallic blue-gray. From the large size, falcon shape, and the confirming blue-gray back, both birds were identified as Peregrine Falcons. This section of the Parkway has precipitous areas, suggesting that the pair may have been breeding. Apparently the only breeding record in North Carolina is for Looking Glass Rock on the Pisgah Preserve (Malcolm Edwards, fide Chamberlain, 1954).

WILLOW FLYCATCHER (*Empidonax trailli*): Brown and Marsh discovered a pair of the "fitz-bew" species of Traill's Flycatcher on 7 June. The birds appeared to have a nest located along the bank of the North Fork of the New River. The pair made repeated trips to and from an alder bush bordering the opposite bank of the river. On 25 June Edmund LeGrand, Harry LeGrand, and Merrill Lynch found a singing male (fitz-bew variety) a few miles west of West Jefferson. The species is considered locally fairly common in summer just northwest of Ashe County in the vicinity of Abingdon, Virginia (Scott, 1966). These and other recently published sightings indicate that the Willow Flycatcher is extending its nesting range in the Appalachians, with the southernmost report to date being from Rabun County, Georgia (Mellinger, 1971).

LEAST FLYCATCHER (*Empidonax minimus*): In the Chestnut Hill area the Least Flycatcher is a fairly common summer resident, preferring the woodland strips bordering rivers and fields. While exploring both Forks of the New River on 7 June, Brown and Marsh heard eight birds calling. On 24 and 25 June Edmund LeGrand, Harry LeGrand, and Merrill Lynch recorded nine birds along the New River system in Ashe County. Except for the Highlands-Cashiers region of southwest North Carolina, the Least Flycatcher appears to be more numerous along the New River system than elsewhere in the state during the nesting season.

OLIVE-SIDED FLYCATCHER (*Nuttallornis borealis*): On the morning of 29 May Brown observed an Olive-sided Flycatcher near Weaver's Ford, Ashe County. The white tufts behind the wings and the "vest pattern" on the breast were carefully noted as the bird perched on a dead pine tree. On one occasion the call notes "pip-pip-pip" were heard. Near milepost marker 247 in Alleghany County (elevation 3,200 feet), Ross Silcock discovered an Olive-sided Flycatcher on 24 June. The bird was feeding over a stream in a ravine bordered on one side by white pine and on the other by a mixed pine-hardwood forest with a thick understory of mountain laurel (*Kalmia latifolia*). All field marks were carefully observed. The bird was not singing, and it could not be found the next day or following weekend; therefore, it is presumed to have been a wandering, non-breeding bird.

Although the bird seen on 29 May was perhaps a late migrant, the bird observed on 24 June is one of the few recent summer records of Olive-sided Flycatcher in North Carolina outside of the Great Smoky Mountains. The low altitudes at which these birds were recorded are unusual, as most breeding season observations are made above 5,000 feet in spruce-fir forests.

WARBLING VIREO (*Vireo gilvus*): A moderate-sized breeding population of this species occurs along the New River system in northeastern Ashe County. On 22 May 1971 Brown found four singing males along the North and South Forks of the New River near the Chestnut Hill community. On 20 June 1971 he found a nest of this species along the North Fork. The following year Warbling Vireos were observed by a number of birders in the same vicinity. Three singing birds were noted by Brown on 29 May 1972, and three were again found on 7 June by Brown and Marsh. On 24 June Lynch and both LeGrands saw and heard five singing males and a probable juvenile following a male. All of these records were made in open deciduous groves adjacent to the two rivers, within 3 miles of the confluence of them.

The nesting status of the Warbling Vireo in North Carolina has never been well understood. Pearson, Brimley. and Brimley (1959) mentions that this species nested in Buncombe County in the 1890s and 1900s according to the records of Cairns, Davis, and Oberholser. This book gives no other nesting data for the state, and it is thus probable that Thomas Burleigh did not record the species at Asheville during his stay there in the early 1930s. However, Russell (1948) had a possible record of a Warbling Vireo and its nest at Chapel Hill on 30 May 1947. In addition to these records, others which suggest nesting in North Carolina are a bird seen scolding at North Wilkesboro on 8 July 1964 by Wendell P. Smith (Chamberlain, 1964) and a bird seen and heard along the Dan River near Madison in late May 1970 on a Breeding Bird Survey route by William Noonan (pers. com.).

The Ashe County records and the Madison record are not unexpected, because Warbling Vireos have been found nesting in nearby Virginia localities. Scott (1966) and others found the vireos to be fairly common in the lowlands of Washington County (just northeast of Ashe County) in June 1966 below 2,100 feet. Eggleston and Lyle (1952) listed the species as an uncommon summer resident in the Danville area just over the North Carolina line, 30 miles NE of Madison. The Warbling Vireo is essentially limited to the open woods along the larger rivers, and special search should be made for it along such rivers as the Dan, New, and French Broad.

NORTHERN ORIOLE (*Icterus galbula*): Along the New River water-system where mature deciduous trees border the river or a large stream, the Northern ("Baltimore") Oriole is a common summer resident. During the breeding season while the males are singing, the species' abundance is easily noted. On 22 May 1971, nine singing males were heard by Brown along the North Fork of the New River. During 6 hours of field work 20 singing males were noted on 7 June 1972 on the two forks and the tributaries of the New River by Brown and Marsh. Brown has found five nests in the past two breeding seasons (1971, 1972) in this area and has noted each time that they seem to prefer the balm-of-Gilead trees as nesting sites.

Even though Pearson, Brimley, and Brimley (1959) describe the Baltimore Oriole's nesting status as "not an uncommon summer resident west of the Blue Ridge," the scarcity of recent reports from the mountains suggests that it is now less numerous than stated above; therefore, the sizable population of Baltimore Orioles in the New River watershed is noteworthy.

DISCUSSION

The unusual abundance of the Least Flycatcher, Warbling Vireo, and Baltimore Oriole in Ashe County is undoubtedly due to the large amount of suitable habitat supplied by the New River system. The rows of mature hardwoods along the roads and riverbanks bordering pastures and weedy fields offer the proper open country habitat frequented by these species.

The occurrence of the above three species in the same locale is most unusual for the North Carolina mountains because the vireo is usually found nesting in the southern Appalachians below 2,500 feet and the flycatcher generally above this elevation. The presence of these species together suggests that Ashe County is an intermediate zone between the true mountains of North Carolina (where Least Flycatchers and Baltimore Orioles nest) and the valleys of western Virginia (where the orioles and Warbling Vireos nest).

Recent summer records of Peregrine Falcons and Olive-sided Flycatchers in North Carolina are scarce and are primarily limited to the high altitude areas in the Great Smoky Mountains. Thus, the early summer records of these two species in Alleghany County are most unusual. Unfortunately no evidence of nesting could be found.

ACKNOWLEDGMENTS

Special thanks to Edmund LeGrand, Merrill Lynch, and W. Ross Silcock for contributing bird sight records pertinent to this paper.

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BRIEFS FOR THE FILES

(Continued from page 29)

LAPLAND LONGSPUR: An unusually early occurrence was recorded 5 October on the North Carolina Outer Banks where a single bird was seen near Ocracoke Village by Paul DuMont and Paul Sykes. Seven were subsequently seen by Edmund LeGrand and Harry LeGrand at the southern tip of Hatteras Island on 23 November. The latter observers also found two at Pea Island on 24 November.

SNOW BUNTING: One was seen at Cedar Island, N.C., on 10 November by John Fussell. Other sightings were reported of one at Wrightsville Beach, N.C., on 15 November, Frances Needham, Ramona Snavely, et al.; two at Hatteras Island on 18 November, Don and Doris Cohrs; and two at Pea Island on 22 November, James Pullman.

CBC Roundtable

... with Louis C. Fink

Chickadees—Can You Recognize a Hybrid?

On 6 October 1973 I was birding on Richland Balsam, which lies on the border of Haywood and Jackson Counties in North Carolina. At an elevation of about 6,200 feet I heard a small flock of chickadees. Hoping them to be Black-capped Chickadees (*Parus atricapillus*), I began squeaking, swishing, and imitating the Saw-whet Owl's call. My vocalizations were quite effective. Good numbers of both species of kinglets, Red-breasted Nuthatches, and Solitary Vireos immediately flocked in the firs over me. Astonishingly, the chickadees did not respond to my noises, and I began to suspect these were no "ordinary" chickadees. After much time and effort I was able to get brief looks at two of the birds.

The birds appeared larger than Carolina Chickadees (*P. carolinensis*), perhaps the same size as the Black-capped (with which I am familiar in West Virginia, northern Virginia, and the Great Smokies). However, there seemed to be a clear separation between the black bib and the white breast and very little white in the wing, both field marks of the Carolina. The birds seemed too shy and restless to be Black-capped Chickadees, much like the Carolina in behavior. The song was the two-note one of the Black-capped, but the calls resembled those of the Carolina in tempo and tonal quality. Certainly the habitat was that of the Black-capped in the southern Appalachians (spruce-fir). Their strangest characteristic was their absence of curiosity. I can't recall ever having squeaked for 15 minutes with chickadees of either species in the vicinity without attracting them to me.

A paper by Tanner (*Auk,* 69:407-424) appears to shed some light on the chickadee problem. The Black-capped Chickadees collected in the Plott Balsams, just to the northwest of Richland Balsam, had a lower tail to wing length ratio than Black-cappeds collected in the Great Smokies. Tanner suggested that since this species is rare outside of the Smokies, some of the birds may have been forced to mate with Carolina Chickadees, which are common on the lower elevations of the mountains and have a very low tail to wing length ratio. Offspring of this mating would likely have wing and tail measurements between those of the two parent species. Although Tanner found no positive evidence of hybridization in the southern Appalachians, he indicates that it is possible in areas where Black-capped populations are very low, such as in the Plott Balsams.

In my opinion the birds I saw on Richland Balsam were hybrids, or better called "intergrades." I certainly don't want to sound like an expert on the subject, because I studied only two or three birds and did not collect them. However, I would like to stress the point that an observer should not automatically call any chickadee he sees in spruce-fir forests a Black-capped, especially at sites outside the Smokies, Although I doubt that "pure" Carolina Chickadees occur in spruce-fir forests, I suspect that chickadees on some of North Carolina's higher mountains are intergrades of the two species. I will greatly appreciate comments on my opinions from those who have done much field work on chickadees in the southern Appalachians.—HARRY E. LeGRAND JR., 331 Yadkin Drive, Raleigh, N.C. 27609.

NOTE—A search through my library reveals two references to the interesting situation which Mr. LeGrand raises. *Audubon Bird Guide Eastern Land Birds* (Richard

H. Pough, 1949) says, "Despite the remarkable similarities between the Carolina Chickadee and the Black-capped Chickadee, the boundary between their ranges is sharply defined, and apparent hybrids are uncommon."

A Field Guide to the Birds (Roger Tory Peterson, 1947) says, "The two are best identified by the localities where found and by voice. The slight differences in the wings are not reliable because of season, wear, angle of light, etc. Moreover the two intergrade where their ranges meet."—L.C.F.

The 600 Club

Earl R. Greene, down on St. Simon's Island in Georgia, is recordkeeper for the 600 Club, that elite group of about 100 men and women who have identified 600 species or more in North America north of the Rio Grande. The only Carolinian I find listed is Edwin L. Stearns of South Carolina with 634 species. Joseph W. Taylor of New York leaves me slack-jawed by topping the list with 710! (I'll have 410 if somebody will show me those Lapland Longspurs at Roanoke Rapids.)

Editorial Comment

The Augusta (Georgia) *Chronicle* wrote, ". . .the objective of the Christmas Bird Count is to identify as many bird species as possible in a given area."

I don't believe that Dr. Fred Denton—who showed me my first Pileated Woodpecker in Augusta 30 years ago when the bird was elusive—would agree with that statement. The editors of the 73rd Christmas Bird Count have pointed out the "increase in the use of the Count for deriving scientific conclusions." If observers are chasing randomly around the country adding species to the day's list, a scientifically valid survey of the bird-life of the area will not result.

Yet we all hear exultant cries of "We logged more species than last year!" Cities vie—not for accurate counts of bird populations—but for dubious records of "high counts." Invitations to participate are couched in words like, "We need your help to beat last year's record."

In Atlanta (where a valuable record of changing bird-life has been compiled for more than 30 years), the area was abandoned in favor of a new location which would be "more fun." In many places, there are reports of competent observers leaving their home bases in favor of a Count area where they may add a bird to their life-lists.

The Count editors say "things will be much tougher" in the future. Uncorroborated sight records will be thrown out, rarities will have to be documented. Let's hope the emphasis will return to a scientific sampling of the bird life, maintained from year to year.

This is not to say the Christmas Bird Count should not be a pleasure, nor that adding Horned Larks to the Raleigh list should not be counted among life's little satisfactions. Let's just make sure we don't overlook the purpose of this "premier exercise in mass masochism and cooperative science."

Bird-finding in North Carolina

Many members of CBC have promised to send in directions to their favorite places. We'll publish them as they come in.

UPPER COASTAL PLAIN AGRICULTURAL RESEARCH STATION – Less than 10 miles from Rocky Mount. Drive north on Route 43, taking SR 1224 to the left when you reach a "Y" in the road.

Headquarters on the right; ask permission to park; look for birds.

The fields have Water Pipits and Eastern Bluebirds; the lake has at least six Common Snipe and an occasional Whistling Swan in winter. Buteos are overhead.

Walk across the road and inspect a smaller pond for woodpeckers, sparrows, Hermit Thrush, Ruby-crowned Kinglet, Cedar Waxwing, and more. Several patches of bamboo provide a roost for at least 1,000 House Sparrows, a remarkable sight.

CHRISTMAS BIRD COUNT 1973	Total Individuals	COAST						COASTAL PLAIN			FALL BELT				PIEDMONT												MOUNTAINS			
		Bodie-Pea Is., N.C. 31 December	Morehead City, N.C. 23 December	Wilmington, N.C. 15 December	Litchfield-Pawleys Is., S.C. 28 December	Charleston, S.C. 30 December	Hilton Head Is., S.C. 18 December	Beaufort Co., N.C. 30 December	Southern Pines, N.C. 21 December	Dillon, S.C. 31 December	Roanoke Rapids, N.C. 27 December	Henderson, N.C. 27 December	Columbia, S.C. 29 December	Aiken, S.C. 16 December	Raleigh, N.C. 22 December	Durham, N.C. 16 December	Chapel Hill, N.C. 30 December	Greensboro, N.C. 29 December	Winston-Salem, N.C. 29 December	Iredell Co., N.C. 30 December	Stanly Co., N.C. 29 December	Charlotte, N.C. 29 December	Greenville, S.C. 29 December	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 28 December	Avery Co., N.C. 27 December	Buncombe Co., N.C. 15 December	Brevard, N.C. 29 December	G.S.M.N.P. 30 December
Common Loon	371	31	13	60	227	9	13	2	----	----	5	----	----	----	----	----	----	2	----	----	7	----	----	----	2	----	----	----	----	----
Red-throated Loon	224	58	2	10	114	18	22	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Red-necked Grebe	2	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Horned Grebe	87	1	5	6	9	35	11	----	----	----	4	----	----	----	3	----	----	3	1	----	9	----	----	----	----	----	----	----	----	----
Pied-billed Grebe	446	78	23	41	9	61	31	6	21	2	11	----	14	14	67	4	3	31	8	2	7	8	1	2	----	----	----	1	1	----
Brown Pelican	95	----	*	6	16	8	65	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Gannet	482	248	80	71	54	28	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Great Cormorant	2	1	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Dbl-cr. Cormorant	3,169	15	1,113	1,898	48	14	81	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Anhinga	6	----	----	----	----	3	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Great Blue Heron	442	28	108	76	29	43	65	3	3	*	17	1	2	1	11	2	6	18	9	1	12	5	----	----	1	1	----	----	*	----
Green Heron	5	----	1	*	----	1	1	----	1	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Little Blue Heron	78	10	5	3	9	14	37	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Cattle Egret	7	1	5	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Great Egret	179	19	13	41	11	46	48	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Snowy Egret	114	7	18	35	2	18	34	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Louisiana Heron	194	12	44	50	33	27	28	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Black-cr. Night H.	345	85	147	70	11	32	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Yellow-cr. Night H.	6	----	----	4	----	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
American Bittern	10	7	1	----	----	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Glossy Ibis	1	1	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
White Ibis	66	1	16	38	8	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Whistling Swan	543	173	----	----	----	18	----	350	----	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Canada Goose	3,464	1,940	----	20	71	----	----	108	14	----	630	----	----	----	2	----	----	9	415	----	----	31	----	206	----	----	----	18	----	----
Snow Goose	10,022	10,015	----	----	----	5	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----
Mallard	2,243	191	79	14	362	231	14	118	56	4	449	----	9	----	212	19	3	133	206	4	23	22	12	40	----	----	----	15	27	----
Black Duck	1,209	700	19	6	79	77	29	4	15	----	94	----	----	----	62	----	----	10	107	----	----	5	----	2	----	----	----	----	----	----
Gadwall	457	360	----	8	1	33	4	----	6	----	6	----	----	----	30	----	----	7	2	----	----	----	----	----	----	----	----	----	----	----
Pintail	4,277	4,200	17	3	2	50	----	----	----	----	1	----	----	----	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Green-winged Teal	5,260	5,000	36	5	----	190	----	----	----	----	6	----	1	----	15	----	----	----	----	----	----	7	----	----	----	----	----	----	----	----
Blue-winged Teal	77	6	*	15	----	50	3	----	1	----	----	----	----	----	----	----	----	----	1	----	----	----	1	----	----	----	----	----	----	----
American Wigeon	658	300	*	1	100	104	12	3	2	----	82	----	2	----	11	----	----	----	7	----	----	34	----	----	----	----	----	----	----	----
Northern Shoveler	1,484	1,350	----	20	----	105	----	----	4	----	----	----	----	----	1	----	----	----	1	----	----	----	----	----	----	----	----	3	----	----
Wood Duck	161	----	11	8	5	20	8	26	4	3	10	----	12	----	13	----	5	4	----	----	----	27	----	----	2	----	----	3	----	----
Redhead	39	27	----	----	2	----	1	----	----	----	----	----	----	----	----	----	----	----	2	----	----	6	----	1	----	----	----	----	----	----
Ring-necked Duck	1,038	45	*	7	35	113	53	4	122	----	159	----	9	7	325	----	----	7	73	----	1	15	----	----	7	----	----	53	3	----
Canvasback	325	50	----	----	55	190	----	----	1	----	8	----	----	----	16	----	----	4	1	----	----	----	----	----	----	----	----	----	----	----
Greater Scaup	338	----	----	----	10	100	215	6	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	3	----	----	----	----	----	----
Lesser Scaup	2,976	1	----	7	----	----	2,941	----	4	----	9	----	----	----	4	----	----	----	1	----	----	3	6	----	----	----	----	----	----	----
Scaup (sp. ?)	65	----	4	----	----	60	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CHRISTMAS BIRD COUNT 1973	Total Individuals	COAST						COASTAL PLAIN			FALL BELT				PIEDMONT												MOUNTAINS			
		Bodie-Pea Is., N.C. 31 December	Morehead City, N.C. 23 December	Wilmington, N.C. 15 December	Litchfield-Pawleys Is., S.C. 28 December	Charleston, S.C. 30 December	Hilton Head Is., S.C. 18 December	Beaufort Co., N.C. 30 December	Southern Pines, N.C. 21 December	Dillon, S.C. 31 December	Roanoke Rapids, N.C. 27 December	Henderson, N.C. 27 December	Columbia, S.C. 29 December	Aiken, S.C. 16 December	Raleigh, N.C. 22 December	Durham, N.C. 16 December	Chapel Hill, N.C. 30 December	Greensboro, N.C. 29 December	Winston-Salem, N.C. 29 December	Iredell Co., N.C. 30 December	Stanly Co., N.C. 29 December	Charlotte, N.C. 29 December	Greenville, S.C. 29 December	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 28 December	Avery Co., N.C. 27 December	Buncombe Co., N.C. 15 December	Brevard, N.C. 29 December	G.S.M.N.P. 30 December
Common Goldeneye	8	----	1	----	2	----	1	----	----	----	----	----	----	----	----	----	----	3	----	----	----	1	----	----	----	----	----	----	----	----
Bufflehead	308	32	45	41	4	96	41	----	1	----	10	----	----	----	31	----	----	----	*	----	----	6	----	----	----	----	----	----	1	----
Oldsquaw	10	5	*	----	1	----	2	----	----	----	----	----	----	----	1	----	----	1	*	----	----	----	----	----	----	----	----	----	----	----
Common Eider	*	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Surf Scoter	658	2	1	----	5	600	50	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Black Scoter	132	17	3	----	10	102	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Scoter (sp. ?)	105	47	----	58	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ruddy Duck	452	79	5	----	2	107	4	12	3	----	----	----	----	----	228	----	2	3	----	----	----	7	----	----	----	----	----	----	----	----
Hooded Merganser	396	31	3	12	6	76	63	----	75	----	72	----	----	1	49	----	----	----	----	----	----	----	----	----	----	----	----	----	8	----
Common Merganser	11	----	----	----	7	----	----	----	----	----	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Red-br. Merganser	3,714	2,200	83	1,249	64	94	18	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Turkey Vulture	244	----	11	11	15	10	24	*	*	1	70	6	6	1	----	----	18	13	15	12	13	1	----	1	----	2	----	----	1	13
Black Vulture	180	----	4	2	13	16	92	4	----	----	23	----	6	4	2	----	----	----	*	9	5	----	----	----	----	----	----	----	----	----
Sharp-shinned Hawk	46	13	6	7	3	3	3	1	----	1	----	----	----	----	*	1	1	3	2	----	----	----	----	----	----	1	1	----	----	----
Cooper's Hawk	20	1	----	1	1	4	----	----	----	----	1	----	----	----	1	----	----	2	3	1	1	----	----	----	----	1	1	----	1	1
Red-tailed Hawk	259	----	6	12	15	11	23	3	8	4	13	4	22	3	16	6	9	46	13	6	4	20	----	1	----	----	3	----	2	9
Red-shouldered Hawk	70	2	4	3	8	15	12	----	1	----	2	----	4	----	2	1	4	4	*	1	----	6	----	----	----	----	----	1	----	----
Broad-winged Hawk	3	----	----	----	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----
Rough-legged Hawk	4	----	----	----	----	----	1	----	----	----	----	----	----	----	1	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----
Bald Eagle	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----
Marsh Hawk	123	37	5	21	1	17	3	1	2	2	4	----	5	4	----	----	*	----	----	8	----	12	1	----	----	----	----	----	----	----
Osprey	2	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Peregrine Falcon	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Merlin	13	6	1	----	----	1	3	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----
American Kestrel	397	27	33	28	31	18	73	34	10	5	27	----	16	13	19	2	3	8	3	15	8	6	2	1	----	2	----	2	10	1
Ruffed Grouse	19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5	6	1	7
Bobwhite	853	3	31	70	28	21	37	11	40	10	3	----	20	39	120	28	119	26	13	3	74	75	----	5	----	4	6	32	25	10
Ring-neck. Pheasant	30	30	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Turkey	4	----	----	----	----	1	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
King Rail	20	12	4	2	----	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Clapper Rail	158	7	28	61	11	36	15	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Virginia Rail	53	38	1	13	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sora	17	3	*	4	4	5	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Common Gallinule	74	----	1	*	5	62	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
American Coot	1,959	240	32	215	54	600	7	167	8	----	----	----	37	----	467	----	----	70	21	----	12	21	8	----	----	----	----	----	----	----
Am. Oystercatcher	420	----	8	197	9	203	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Semipalmated Plover	309	6	49	127	39	13	75	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Piping Plover	82	16	20	13	27	----	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Killdeer	867	23	161	37	----	12	75	28	18	12	69	----	32	6	39	22	22	54	59	21	34	105	2	----	----	----	1	2	33	----
Bl.-bellied Plover	1,036	389	190	279	59	62	57	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----

CHRISTMAS BIRD COUNT 1973	Total Individuals	COAST						COASTAL PLAIN			FALL BELT				PIEDMONT												MOUNTAINS			
		Bodie-Pea Is., N.C. 31 December	Morehead City, N.C. 23 December	Wilmington, N.C. 15 December	Litchfield-Pawleys Is., S.C. 28 December	Charleston, S.C. 30 December	Hilton Head Is., S.C. 18 December	Beaufort Co., N.C. 30 December	Southern Pines, N.C. 21 December	Dillon, S.C. 31 December	Roanoke Rapids, N.C. 27 December	Henderson, N.C. 27 December	Columbia, S.C. 29 December	Aiken, S.C. 16 December	Raleigh, N.C. 22 December	Durham, N.C. 16 December	Chapel Hill, N.C. 30 December	Greensboro, N.C. 29 December	Winston-Salem, N.C. 29 December	Iredell Co., N.C. 30 December	Stanly Co., N.C. 29 December	Charlotte, N.C. 29 December	Greenville, S.C. 29 December	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 28 December	Avery Co., N.C. 27 December	Buncombe Co., N.C. 15 December	Brevard, N.C. 29 December	G.S.M.N.P. 30 December
Ruddy Turnstone	372	6	21	120	69	10	146	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Am. Woodcock	40	7	3	9	----	3	1	----	----	----	3	1	----	4	4	----	----	----	4	----	1	----	----	----	----	----	----	----	----	----
Common Snipe	251	41	13	8	1	61	5	2	17	----	15	----	----	----	17	1	----	7	41	1	10	10	----	----	----	----	----	1	----	----
Whimbrel	3	----	----	1	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Spotted Sandpiper	5	----	----	1	----	1	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Willet	333	7	15	162	31	55	63	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Greater Yellowlegs	160	28	45	73	3	8	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Lesser Yellowlegs	68	37	6	16	1	----	8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Red Knot	17	6	10	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Purple Sandpiper	5	----	2	3	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Least Sandpiper	164	161	1	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Dunlin	7,036	2,400	1,272	2,529	338	94	403	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Short-billed Dow.	327	17	52	215	----	39	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Long-billed Dow.	52	46	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Dowitcher (sp. ?)	71	----	30	----	41	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Semip. Sandpiper	401	32	75	200	84	----	10	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Western Sandpiper	574	49	7	213	12	48	245	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Marbled Godwit	19	----	2	7	----	6	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sanderling	1,056	432	170	183	57	----	214	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
American Avocet	86	86	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Glaucous Gull	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Gr. Bl.-backed Gull	1,324	1,250	27	37	3	1	----	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Herring Gull	11,558	7,558	2,136	922	216	350	305	19	----	----	8	----	25	----	----	----	----	1	----	----	25	----	----	----	1	----	----	----	----	----
Ring-billed Gull	23,293	5,700	9,551	1,610	980	195	734	29	1	----	3,590	85	32	----	2	----	----	415	*	----	320	----	----	----	49	----	----	----	----	----
Laughing Gull	1,103	500	90	266	86	36	125	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Bonaparte's Gull	237	78	80	4	29	14	30	----	----	----	----	----	----	----	----	----	----	----	----	1	1	----	----	----	----	----	----	----	----	----
Black-legged Kittiwake	43	43	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Forster's Tern	502	66	52	127	64	35	158	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Common Tern	23	1	----	1	13	1	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Royal Tern	277	54	1	138	26	1	57	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Caspian Tern	37	3	----	4	2	8	20	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Black Skimmer	715	90	126	235	125	21	118	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ringed Turtle Dove	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4	----	----	----	----	----	----	----	----	----	----	----
Rock Dove	1,335	1	44	150	15	----	----	*	2	3	38	22	147	35	161	----	36	89	110	18	20	161	13	5	----	15	----	242	8	----
Mourning Dove	6,217	66	74	264	81	293	619	38	211	124	545	62	143	36	1,151	269	453	313	262	61	40	311	22	28	3	66	1	383	266	32
Ground Dove	36	----	----	3	33	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Barn Owl	8	2	2	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	2	1	----	----	----	----	----	----	----	----	----	----
Screech Owl	35	4	4	2	----	----	----	1	1	----	1	----	----	3	2	----	----	----	11	1	1	----	----	1	----	1	1	1	----	----
Great Horned Owl	40	2	6	2	*	5	1	----	----	----	----	----	----	2	4	1	6	1	3	----	1	2	----	----	1	1	----	2	----	----
Barred Owl	30	----	1	2	----	8	1	----	----	*	1	----	3	1	2	----	1	----	*	2	1	4	----	----	----	----	1	2	----	----

CHRISTMAS BIRD COUNT 1973	Total Individuals	COAST						COASTAL PLAIN			FALL BELT				PIEDMONT												MOUNTAINS			
		Bodie-Pea Is., N.C. 31 December	Morehead City, N.C. 23 December	Wilmington, N.C. 15 December	Litchfield-Pawleys Is., S.C. 28 December	Charleston, S.C. 30 December	Hilton Head Is., S.C. 18 December	Beaufort Co., N.C. 30 December	Southern Pines, N.C. 21 December	Dillon, S.C. 31 December	Roanoke Rapids, N.C. 27 December	Henderson, N.C. 27 December	Columbia, S.C. 29 December	Aiken, S.C. 16 December	Raleigh, N.C. 22 December	Durham, N.C. 16 December	Chapel Hill, N.C. 30 December	Greensboro, N.C. 29 December	Winston-Salem, N.C. 29 December	Iredell Co., N.C. 30 December	Stanly Co., N.C. 29 December	Charlotte, N.C. 29 December	Greenville, S.C. 29 December	Elkin-Ronda, N.C. 26 December	North Wilkesboro, N.C. 28 December	Caldwell Co., N.C. 28 December	Avery Co., N.C. 27 December	Buncombe Co., N.C. 15 December	Brevard, N.C. 29 December	G.S.M.N.P. 30 December
Short-eared Owl	2	1	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Saw-whet Owl	2	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	1	----	----
Goatsucker (sp. ?)	*	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Hummingbird (sp. ?)	*	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Belted Kingfisher	366	18	26	50	36	41	58	5	8	1	3	1	8	5	6	8	3	29	15	1	10	8	----	1	1	1	2	3	4	14
Common Flicker	1,721	165	54	142	91	223	291	51	77	10	85	19	48	26	92	49	44	75	49	12	27	50	5	17	1	2	2	6	3	5
Pileated Woodp.	204	3	7	13	16	37	35	4	4	1	9	----	16	3	1	----	1	----	7	4	4	1	----	2	3	2	1	6	10	14
Red-bellied Woodp.	801	18	10	39	35	95	79	19	21	3	45	20	21	13	65	15	65	69	51	6	25	50	3	11	1	6	----	8	3	5
Red-headed Woodp.	78	----	1	3	----	13	3	1	----	----	----	1	----	1	8	3	1	6	6	2	25	4	----	----	----	----	----	*	----	----
Yel.-bel. Sapsucker	321	3	4	12	22	24	34	2	16	*	21	3	20	8	15	6	15	21	22	6	27	14	----	9	----	----	----	10	4	3
Hairy Woodpecker	135	2	2	6	1	11	6	----	7	1	9	----	5	----	6	----	12	8	7	2	5	5	2	3	1	1	11	4	7	11
Downy Woodpecker	544	7	13	10	17	19	9	9	15	2	26	2	5	11	49	1	37	55	33	8	45	33	4	4	----	5	12	48	25	40
Red-cock. Woodp.	36	----	2	3	7	12	----	2	2	----	----	----	----	8	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Great Cr. Flycatcher	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Eastern Phoebe	188	2	9	10	21	24	21	2	1	3	5	----	4	2	9	6	17	2	3	5	2	2	----	3	----	1	1	11	*	22
Acadian Flycatcher	1	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Horned Lark	341	----	----	----	----	----	----	----	45	----	199	----	----	----	3	----	5	25	4	23	10	20	----	----	----	----	----	7	----	----
Tree Swallow	29	----	----	29	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Blue Jay	2,765	7	30	120	59	253	289	43	57	7	117	45	103	67	179	97	117	292	77	58	208	182	18	49	7	54	39	64	57	70
Common Raven	24	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	17	1	----	6
Common Crow	3,871	61	46	197	69	202	248	----	28	*	45	38	30	20	205	29	115	274	156	45	270	122	27	321	44	8	251	512	311	197
Fish Crow	3,146	44	260	1,962	702	37	141	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Black-cap. Chickadee	†	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	†
Carolina Chickadee	3,043	30	38	46	73	102	140	37	27	4	114	18	39	60	132	23	164	189	212	41	255	208	9	22	4	21	230	337	159	309
Tufted Titmouse	1,631	1	29	38	48	49	36	27	30	4	22	12	9	8	81	22	103	108	116	14	128	84	2	24	3	24	48	255	109	197
White-br. Nuthatch	368	1	----	----	----	12	----	6	5	----	2	----	----	13	4	5	34	30	29	7	28	----	----	2	1	6	22	53	52	56
Red-br. Nuthatch	73	----	1	----	----	----	----	1	6	----	----	1	----	----	2	----	3	----	3	----	----	----	----	----	----	----	37	3	----	16
Brown-hd. Nuthatch	466	16	15	15	27	66	1	6	56	14	7	2	19	7	14	13	14	50	37	4	20	59	3	1	----	----	----	----	----	----
Brown Creeper	107	3	2	1	1	3	*	1	3	1	4	----	2	1	14	2	10	14	8	6	2	1	----	1	----	----	8	3	5	11
House Wren	92	24	9	27	4	13	*	----	----	----	1	----	1	----	2	----	----	----	----	----	----	----	----	----	----	----	----	11	----	----
Winter Wren	127	6	3	8	7	9	----	----	11	1	13	2	2	2	9	1	2	6	4	1	1	2	----	1	----	----	14	5	3	14
Carolina Wren	1,738	111	44	74	60	109	84	29	31	8	88	23	49	22	102	41	119	129	143	26	60	141	2	15	13	6	24	64	43	78
Long-bil. Marsh W.	124	35	11	69	2	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Short-bil. Marsh W.	78	35	12	19	----	3	8	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Mockingbird	1,438	31	29	66	58	56	110	23	33	14	57	36	31	16	125	58	84	184	83	27	88	116	22	19	1	10	3	25	13	20
Gray Catbird	137	81	6	15	5	10	10	1	1	*	5	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	1	----	----
Brown Thrasher	344	24	3	21	15	65	20	6	11	*	20	19	11	8	22	9	8	8	5	3	30	11	2	5	----	----	1	8	4	5
American Robin	6,336	3,000	113	634	650	242	234	28	475	16	18	5	89	214	17	4	10	7	51	19	98	255	1	12	8	7	4	89	12	24
Wood Thrush	1	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Hermit Thrush	173	18	16	9	11	14	4	----	14	*	8	----	2	11	17	2	7	1	1	----	7	5	----	5	----	----	1	4	3	13

CHRISTMAS BIRD COUNT 1973		COAST						COASTAL PLAIN			FALL BELT				PIEDMONT												MOUNTAINS			
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Swainson's Thrush	2	----	----	----	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	*	----
Eastern Bluebird	1,095	----	4	----	25	39	82	27	94	16	73	4	41	8	34	43	131	23	25	83	157	52	10	23	----	14	----	6	60	21
Bl.-gr. Gnatcatcher	13	1	----	3	2	5	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Goldern-cr. Kinglet	1,266	22	27	24	62	68	----	7	38	1	38	16	4	30	233	87	128	75	38	35	9	79	----	4	1	----	42	59	34	105
Ruby-cr. Kinglet	1,294	25	45	73	150	219	45	17	33	6	93	8	25	41	135	18	96	67	32	4	72	58	4	6	1	3	1	7	2	8
Water Pipit	524	1	9	94	13	----	----	----	126	----	113	----	42	41	27	28	----	----	25	----	----	5	----	----	----	----	----	----	----	----
Cedar Waxwing	774	9	*	*	28	61	21	33	121	----	96	----	27	28	30	55	12	41	42	23	17	101	----	19	----	----	----	----	10	----
Loggerhead Shrike	215	----	10	1	3	6	19	----	13	2	----	2	24	9	17	3	5	14	2	13	23	37	3	2	----	1	----	----	2	4
Starling	2,142,457	530	227	6,035	287	121	94	304	2,190	64	10,723	220	1,401	1,091	5,382	2,380	426	903,413	203,000	263	455	2,081	88	159	12	150	231	1,000,582	407	141
White-eyed Vireo	11	----	----	----	1	9	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Solitary Vireo	19	3	2	2	7	4	----	----	----	*	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Black-and-white W.	16	----	----	----	----	2	13	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Orange-crowned W.	9	2	1	2	----	3	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----
Black-th. Blue W.	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Yellow-rumped Warbler	12,157	7,850	1,089	323	593	1,158	418	100	15	19	118	9	33	12	164	10	59	44	7	10	22	71	----	2	----	----	----	26	----	5
Yellow-throated W.	18	----	----	2	3	7	6	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pine Warbler	291	5	2	12	19	118	33	8	19	*	5	1	16	6	20	5	14	1	1	1	2	3	----	----	----	----	----	*	----	----
Prairie Warbler	11	----	----	----	----	11	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Palm Warbler	66	2	7	3	1	1	14	4	6	*	15	----	----	----	7	1	5	----	----	----	----	----	----	----	----	----	----	*	----	----
Connecticut Warbler	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Common Yellowthroat	149	22	11	57	8	28	8	----	4	----	1	----	----	4	1	1	1	----	1	----	----	2	----	----	----	----	----	----	----	----
Yellow-br. Chat	2	----	*	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
House Sparrow	4,395	31	165	250	18	30	71	169	51	53	138	50	86	66	193	63	80	711	660	35	575	255	15	55	6	32	151	238	108	40
E. Meadowlark	3,433	246	62	32	16	123	211	76	158	80	300	10	196	109	334	68	95	263	162	95	147	318	29	23	1	57	1	60	99	62
Yellow-headed Blackbird	1	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Red-wg. Blackbird	794,861	475	841	949	185	794	896	176	426	409	8,665	----	507	4,566	2,518	1,586	266	20,538	85	50	30	724	18	140	4	----	9	750,000	----	4
Northern Oriole	141	----	14	4	----	----	----	19	21	*	2	14	----	----	27	5	1	3	2	----	27	2	----	----	----	----	----	----	----	----
Rusty Blackbird	62,170	----	44	125	1	5	135	----	47	2	4	----	2	26	11	24	16	60,130	151	----	----	445	----	----	----	----	----	1,000	2	----
Brewer's Blackbird	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	3	----	----	----	----	----	3	*	----
Boat-tailed Grackle	3,742	382	1,089	492	187	359	1,233	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Common Grackle	2,958,594	87	110	10,480	66	638	2,312	5	509	45	31,160	10	101	3,030	6,179	635	2,007	900,821	1,000,000	8	21	358	1	1	----	----	3	1,000,001	1	5
Brown-hd. Cowbird	135,034	----	58	*	30	18	42	3	25	----	680	33	5	375	1,002	813	796	120,860	115	22	43	109	----	5	----	----	----	10,000	*	----
Cardinal	4,602	95	45	104	163	248	364	51	64	15	230	58	359	50	307	209	354	233	127	83	386	341	19	64	2	32	42	214	100	243
Rose-br. Grosbeak	1	----	----	----	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Blue Grosbeak	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Evening Grosbeak	1,165	2	----	1	40	8	----	5	10	----	104	85	40	----	28	8	19	21	22	16	109	24	----	36	----	45	15	25	13	489
Purple Finch	1,790	12	60	77	39	43	10	11	45	----	76	18	12	*	130	77	126	157	127	51	179	170	----	16	----	18	44	130	111	51
House Finch	300	----	----	----	----	----	----	----	----	----	2	19	----	----	40	----	1	61	111	10	16	23	----	7	----	10	----	----	----	----
Pine Siskin	2,058	6	37	158	68	18	20	----	57	*	37	2	5	----	466	78	12	272	12	10	18	276	----	----	----	13	252	*	51	190
Am. Goldfinch	2,615	60	85	101	183	153	57	28	194	1	101	33	152	38	285	92	128	196	156	56	85	121	24	38	----	8	51	33	89	67

CHRISTMAS BIRD COUNT 1973	Total Individuals	COAST						COASTAL PLAIN			FALL BELT				PIEDMONT												MOUNTAINS			
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Red Crossbill	195	----	----	----	----	----	----	----	20	----	1	----	----	----	9	----	15	74	*	20	----	----	----	----	----	----	6	----	----	50
Ruf.-sided Towhee	2,029	121	16	81	73	268	85	16	40	6	89	26	74	58	189	55	99	86	104	46	149	166	6	39	5	24	20	22	33	33
Savannah Sparrow	1,176	115	36	150	8	62	37	1	242	*	260	----	35	20	136	12	2	9	2	----	----	46	----	----	----	----	----	2	1	----
Grasshopper Sp.	6	----	----	1	----	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----
Le Conte's Sparrow	4	----	----	----	----	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Henslow's Sparrow	4	----	----	----	----	4	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Sharp-tailed Sp.	90	22	7	42	2	9	6	----	----	----	----	----	----	----	----	----	----	----	----	----	2	----	----	----	----	----	----	----	----	----
Seaside Sparrow	105	9	11	81	1	2	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Vesper Sparrow	43	----	----	6	2	15	1	----	2	----	2	----	----	10	1	----	----	----	1	----	----	----	----	----	----	----	1	2	----	----
Bachman's Sparrow	5	----	----	----	2	2	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	----	----	----	----	----	----	----	----
Dark-eyed Junco	11,023	4	97	124	203	145	25	163	555	37	1,480	261	40	51	1,103	931	827	939	283	150	652	811	81	99	4	39	366	749	560	244
Tree Sparrow	19	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	2	----	----	----	----	4	----	----	----	12	----	----
Chipping Sparrow	672	2	55	95	37	54	93	3	134	6	12	----	15	53	30	*	24	----	*	----	7	18	----	----	----	----	----	34	----	----
Field Sparrow	2,522	15	13	12	45	45	52	29	72	6	145	5	83	144	156	41	126	153	189	5	46	255	101	4	3	14	94	488	74	107
White-cr. Sparrow	111	3	----	----	----	1	----	----	----	----	17	----	4	----	16	10	9	6	9	----	4	----	----	17	----	----	----	3	12	----
White-th. Sparrow	11,058	59	56	298	190	428	141	29	171	42	2,825	81	565	87	1,270	639	819	660	410	225	350	379	23	488	11	45	156	314	86	211
Fox Sparrow	264	7	13	51	*	59	5	1	26	6	4	1	3	12	11	8	14	3	*	4	5	8	----	9	----	2	----	4	5	3
Lincoln's Sparrow	7	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	6	----	1	----	----	----	----	----	----	----	----	----	----	----
Swamp Sparrow	1,859	438	327	116	21	230	6	2	27	4	145	2	52	7	313	7	90	22	21	----	----	7	----	3	----	----	1	9	----	9
Song Sparrow	6,131	239	139	286	122	197	47	17	71	10	785	3	27	118	1,703	121	308	202	530	49	29	468	1	16	9	12	80	295	95	152
Lapland Longspur	6	----	----	----	----	----	----	----	5	----	1	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Snow Bunting	*	----	*	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Total no. species	215	154	141	150	142	162	139	75	92	49	98	49	73	70	98	67	76	83	88	68	80	83	38	60	33	43	49	73	56	53
Total no. individuals	6,315,366	61,647	22,029	36,884	8,981	12,772	16,175	2,599	7,273	1,091	65,457	1,399	5,038	10,793	26,782	8,867	8,799	2,012,968	1,208,977	1,859	5,646	10,101	591	2,102	213	767	2,314	2,766,626	3,169	3,447
Field observers	532	20	9	18	23	44	37	5	7	1	8	7	14	7	20	15	24	40	36	6	14	26	9	17	2	10	17	13	49	34
Yard observers	125	0	10	0	0	0	1	1	6	0	2	3	0	1	10	2	3	1	4	4	39	1	2	3	0	6	1	11	9	5
Field parties	193	9	5	9	6	10	12	3	4	1	4	1	5	3	10	6	15	12	9	4	6	10	3	4	1	2	8	5	14	12
Party-hours	1,508.5	104	49	92	37	73	99	28	46	9.5	38	8	34	28	78	30	75	98	84	40	32	64	10	42	----	20	35	70	75	110
Party-miles	5,559	212	157	432	154	231	330	150	228	53	242	15	239	187	196	197	159	377	328	189	131	260	75	65	----	35	154	186	300	272

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* Seen in count area during count period but not on count day.

† Figure below includes some Black-capped Chickadees.

CHRISTMAS BIRD COUNT—1973

ELOISE F. POTTER

Despite inclement weather Charleston Christmas bird counters set the pace for Carolina Bird Club in 1973 with 162 species, only two short of Wilmington's 1961 record of 164. Although the Charleston list has a few interesting stragglers (Wood Thrush, Swainson's Thrush, and Rose-breasted Grosbeak), it includes nothing really rare for the locality. This outstanding census appears to be the result of thorough coverage, and all 44 observers should be commended for their fine effort.

The Charleston tally is representative of the 215 species found throughout the Carolinas during the present bird count–short on rare visitors from the north and long on lingering summer residents and fall migrants. Bodie-Pea Island (154 species) adds four names to the all-time Christmas Bird Count list: *Glaucous Gull, Black-throated Blue Warbler, Connecticut Warbler,* and *Yellow-headed Blackbird.* The two warblers are thought to represent first winter records for North Carolina. Hilton Head Island (139 species) adds the *Acadian Flycatcher* to the all-time list. These five additions minus four species (Blue Goose, Common Teal, Ipswich Sparrow, and Oregon Junco) recently lumped by A.O.U. bring the total to 277 species.

The 1973-1974 invasion of northern finches appears to be only moderate, but *Pine Siskins* (2,058) are relatively abundant. The number of *House Finches* (300) is the highest yet recorded in the Carolinas with one or more reported from 11 of the 29 count areas. The center of the population is in the North Carolina piedmont, primarily Winston-Salem (111), Greensboro (61), and Raleigh (40). Sightings of Rough-legged Hawks, Saw-whet Owls, Tree Sparrows, and Lincoln's Sparrows, though few in number, suggest the presence of more individuals than usual in the Carolinas this winter.

Although participants in those censuses taken during the first week of the count period (15 through 22 December) experienced some adverse field conditions, the weather was generally mild for December and decidedly pleasant for most of the counts made after Christmas. The gasoline shortage probably reduced the number of observers in a few places, but it apparently encouraged extensive coverage by foot, thus contributing to the overall excellence of the 1973 Christmas Bird Count in the Carolinas.

Please note the new arrangement of localities in the count table. Several sites that are on or near the fall line have been grouped under the heading "Fall Belt." Henderson, which has a count circle entirely within the piedmont, has been included in this new classification because of its proximity to Roanoke Rapids in the Roanoke River basin. The Editor welcomes your comments on this change and your suggestions for further modifications that might enhance the usefulness of the count table.

COMPILERS' COMMENTS

COAST

BODIE-PEA ISLAND, N.C. (center: 2.7 miles SSE of Bodie Island Lighthouse).

31 December. *Great Cormorant* (Dwight Peake, Richard Peake) was an immature bird flying north from Oregon Inlet; recorded in same vicinity on three of last four Christmas counts. *Cattle Egret* (Paul Sykes, John Williamson) and immature *White Ibis* (Claudia Wilds) are first Christmas count records for area. *Red Knots* (John Fussell, Wesley Messinger) were on flats at Oregon Inlet. The *Glaucous Gull* (Gilbert Grant, Lynn Messinger, Norman Messinger) was in second winter plumage and was studied in direct comparison with Great Black-backed and Herring Gulls on the beach at the northern tip of Pea Island. Although there are several previous winter records for the Oregon Inlet area, this is the first Glaucous Gull found on a Christmas count in the Carolinas. The

CBC CHRISTMAS BIRD COUNT STATISTICS

	1973	1937-1972	
Total number species	215	230	(1972)
Total number individuals	6,315,366	7,636,868	(1960)
Number count areas	29	30	(1972)
Total number observers	657	653	(1972)
Field parties	193	180	(1972)
Party-hours	1,508.5	1,478.5	(1972)
Party-miles	5,554	5,623	(1971)

Highest number species:			
Coast	Charleston, 162	Wilmington, 164	(1961)
Coastal Plain	Southern Pines, 92	New Bern, 95	(1966)
Fall Belt	Roanoke Rapids, 98	Roanoke Rapids, 103	(1972)
Piedmont	Raleigh, 98	Raleigh, 96	(1968)
Mountains	Buncombe Co., 73	Yancey-McDowell, 74	(1972)
Most individuals	Buncombe Co., 2,766,626	Clemson, 5,504,288	(1960)

1,250 *Great Black-backed Gulls* probably represent the largest number of this species ever found in North Carolina at one time. The 500 *Laughing Gulls* are a high count for the season (previous high, 36). The Ake party saw one adult and 34 immature *Black-legged Kittiwakes* from the boat, and eight additional immatures were found by land parties for a count record total of 43. The *Common Tern* (Robert Anderson), *Caspian Terns* (two parties), *Great Crested Flycatcher* (Harry LeGrand), adult male *Black-throated Blue Warbler* (Grace Russell, John Terborgh), adult male *Connecticut Warbler* (Dwight Peake), and female *Yellow-headed Blackbird* (Robert Anderson) were all seen well under favorable field conditions; all but Common Tern are first records for this count. One *Savannah Sparrow* was an "Ipswich" Sparrow. Fifteen of the Snow Geese were dark morphs.–PAUL W. SYKES JR., P.O. Box 2077, Delray Beach, Florida 33444.

MOREHEAD CITY, N.C. (center: 0.7 mile NW of Crab Point).

23 December. The number of *Loggerhead Shrikes* (10) is high for this area. Two female or immature *Common Eiders* were at Fort Macon on 24 December, one of them remaining in vicinity until at least 2 January (John Fussell III and others). Fussell found a *Saw-whet Owl* freshly killed on the highway 1 mile E of Atlantic Beach on 18 December for the first county record of the species. In addition, a "very tame little owl sitting on the parking lot" was described in Fussell's presence by an unidentified person. An unidentified goatsucker, probably a Whip-poor-will, was at Fort Macon 13, 26, and 28 December. On 20 December John O. Fussell II saw a hummingbird at close range in his own yard, but he could not be positive of the species. Four *Snow Buntings* (J.F. III) were at the south end of Radio Island on 27 December. They were feeding next to Ruddy Turnstones and Purple Sandpipers on a large concrete boat landing.–JOHN O. FUSSELL III, Box 520, Morehead City, N.C. 28557.

WILMINGTON, N.C. (center: Monkey Junction).

15 December. *Great Cormorant* (James F. Parnell) was in Cape Fear River. *Whimbrel* (John Fussell) was on Masonboro Island. *Spotted Sandpiper* and *Common Tern* were seen by compiler. *Laughing Gulls* are unusually abundant for season, but waterfowl are scarce.–FRANCES B. NEEDHAM, Box 81, Wilmington, N.C. 28401.

LITCHFIELD-PAWLEYS ISLAND, S.C. (center: entrance to North Litchfield Beach on US 17).

28 December. *Common Merganser* was seen by Julian Harrison, Margaret Harrison, and Philip Stoddard.–FREDERICK PROBST, Route 2, Box 80-C2, Pawleys Island, S.C. 29585.

CHARLESTON, S.C. (center: 14 miles NE of Mt. Pleasant and 0.5 mile E of US 17).

30 December. An excellent count despite the inclement weather! Snow Geese were dark morphs. *Wood Thrush* (Perry Nugent, Kenneth Hough), *Swainson's Thrush* (Nugent, Alan Bills), and male *Rose-breasted Grosbeak* (Nugent and others) are interesting stragglers even though previous winter records exist for all three species, Nugent saw the immature *White-crowned Sparrow* at close range in good light. The bird was in company with a variety of other sparrows, including White-throated Sparrows. –JULIAN R. HARRISON, Department of Biology, College of Charleston, Charleston, S.C. 29401.

HILTON HEAD ISLAND, S.C. (center: 32°12'N, 80°45'W, Spanish Wells Landing).

18 December. Nini Chapin saw the *Rough-legged Hawk* daily during the count period. *Acadian Flycatcher* was seen in good light by Frank Arnold and Tommy Sasser.–DAVID AND VIRGINIA HARRALL, 15 Plantation Drive, Hilton Head Island, S.C. 29928.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: where Upper Goose Creek enters Pamlico River).

30 December.–GERALDINE COX, Route 1, Box 151A, Merritt, N.C. 28556.

SOUTHERN PINES, N.C. (center: 1 mile NW of Skyline). The count circle was moved this year to encompass the new Lake Surf development, which will soon contain a 1,300-acre lake. The change has caused almost no loss of habitat normally covered on previous local counts.

21 December. *Sora* (John Fussell) was flushed at close range from a small cattail marsh; first winter record for area. Five *Lapland Longspurs* (Chris Marsh, John Fussell) were with 35 Horned Larks on a mudflat at Lake Surf, which is now filling. Longspurs have been found here previously this winter, constituting a new species for the county.–J.H. CARTER III, P.O. Box 891, Southern Pines, N.C. 28387.

DILLON, S.C. (center: Dillon).

31 December.–JOHN H. WILSON, Box 535, Dillon, S.C. 29536.

FALL BELT

ROANOKE RAPIDS, N.C. (center: 1.4 miles SE of Weldon).

27 December. Two immature *Whistling Swans* (Merrill Lynch, Cindy Johnson, Bill Collier) were at a large beaver pond near Weldon; third winter record for count circle area. The *Snow Goose* (Harry LeGrand) was an immature seen in flight with a dozen Canada Geese over the Johnston Farm ponds. *Common Mergansers* were in flight over Roanoke Rapids Lake where several had been found by the compiler during the previous 2 weeks. *Gray Catbirds* (5) and *Palm Warblers* (15) are unusually abundant for area. *White-crowned Sparrows* (17) seem to be regular winter residents in suitable habitat in the Occoneechee Neck region. The *Lapland Longspur* (Harry LeGrand) was in flight with five Horned Larks near the place they have been found the past two winters.–J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

HENDERSON, N.C. (center: Henderson).

27 December.–A.W. BACHMAN, 111 Jennette Avenue, Henderson, N.C. 27536.

COLUMBIA, S.C. (center: intersection Gill's Creek and Bluff Road, same as last 7 years). 29 December.–GILBERT BRISTOW, 2921 Blossom Street, Columbia, S.C. 29205.

AIKEN, S.C. (center: Couchton).
16 December. Solitary Vireo and Black-and-white Warbler were seen by compiler. Heavy overcast and poor light conditions caused count to be discontinued before sunset.–GERALD E. KNIGHTON SR., 304 Kirby Drive, North Augusta, S.C. 29841.

PIEDMONT

RALEIGH, N.C. (center: Norfolk and Southern RR crossing on Lake Wheeler Road).
22 December. The 98 species is a new record for a Raleigh Christmas Count. Noteworty species were a dark phase *Rough-legged Hawk* (Harry LeGrand) at Lake Raleigh, a *Merlin* (Harry LeGrand) on Dix Hospital grounds, an *Oldsquaw* (Chris Marsh, David Whitehurst) at Lake Wheeler, and a *Northern Shoveler* (Marsh) at Lake Wheeler. The *House Finches* roost in a large fir tree in the Raleigh Rose Garden. Early morning ice on small ponds may have forced Mallards and Black Ducks into open areas of the larger lakes thus accounting for unusually good numbers of these species.–R.J. HADER, 3313 Cheswick Drive, Raleigh, N.C. 27609.

DURHAM, N.C. (center: 1 mile N and 1 mile E of junction of Eno River and US 501).
16 December. *Green Heron* (Norman Budnitz) flushed from the edge of a pond. The female or immature *Brewer's Blackbird* was found by Robert Ridgely, who is familiar with the species from field work in the western United States and Canada. The bird was surrounded by flocks of Starlings, Red-winged Blackbirds, and Brown-headed Cowbirds, but it did not associate with any of them. Two female or immature *Blue Grosbeaks* (Ridgely) were brown with good tan wing bars, gave "spink" call, and constantly flicked tail to side in an abrupt manner. The habitat was a soybean field. The birds could not be found 2 days later following 5 inches of snow and subfreezing temperatures. The 10 immature *White-crowned Sparrows* were in a single flock.–NORMAN BUDNITZ, Department of Zoology, Duke University, Durham, N.C. 27706.

CHAPEL HILL, N.C. (center: intersection of Franklin and Columbia Streets).
30 December. Among our more unusual sightings were 5 *Palm Warblers* (four parties), a *Common Yellowthroat* for the third consecutive year, a *Tree Sparrow* (compiler), a high count of 9 *White-crowned Sparrows* (three parties), and an almost incredible report of 6 *Linclon's Sparrows* by Edwin Lappi. Our 453 Mourning Doves were 50% over our record in 13 counts. The number of Common Grackles is 40 times our previous high, which probably is not significant for an erratic blackbird species. Wide variations in our recent counts of Water Pipits and Savannah Sparrows are attributed to minor changes in the portions of the count circle covered from year to year.–JAMES O. PULLMAN, Route 6, Box 149, Chapel Hill, N.C. 27514.

GREENSBORO, N.C. (center: Radio Station WBIG transmitter).
29 December. Count area included a multi-acre roost estimated by seven observers to contain 2 million birds. A mixed population of Starlings, Rusty Blackbirds, Brown-headed Cowbirds, Red-winged Blackbirds, and Common Grackles attracted a Red-tailed Hawk. The *Oldsquaw* was present for several days on a small pond along with a single Mallard.–DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N.C. 27408.

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Parkway).
29 December. *Blue-winged Teal* was found by Romona Snavely, Ruth Hill, and party. *Water Pipits* have been present in unusually large numbers all fall. Starlings and grackles were in two large roosts within count area. This is the largest number of *House Finches* yet reported in area. *Tree Sparrow* (Sue Moore, Ann Pollard) and *Lincoln's Sparrow*

(Ramona Snavely) are unusual, but both have been found previously on local Christmas counts.—C. ROYCE HOUGH 713 Lankashire Road, Winston-Salem, N.C. 27106.

IREDELL COUNTY, N.C. (center: South Yadkin River bridge on 115 W).

30 December. *Gray Catbird* (Jane Mullen) was present for second consecutive winter. *Red Crossbill* (Larry Marlin, Dwayne Hayes) is second sighting for Iredell County. *Bonaparte's Gull* (five observers including compiler) is second county record. *Pine Siskins* are first reported sighting in county. The local increase in *Eastern Bluebirds* is notable.—JANE S. MULLEN, 728 E. Broad Street, Statesville, N.C. 28677.

STANLY COUNTY, N.C. (center: 2 miles NW of Badin).

29 December. *Common Loon* (Barrett Crook, Harold Morris) is second record for count. *Bald Eagle* (Raymond Barker, David McCarn) was near Badin Dam. *Bonaparte's Gull* (Vivian Whitlock, Bessie Morgan, Mattie Gereg) was on Badin Lake; first count record. [No details on Saw-whet Owl.—ED.] The *Sharp-tailed* and *Bachman's Sparrows* (Vera Crook, Margaret Crawley) were on the Smith farm, the same place where Henslow's Sparrows were found last year. *Eastern Bluebirds* and *House Finches* are more abundant than in previous years.—MRS. BARRETT CROOK, Route 1, New London, N.C., and MRS. JOHN WHITLOCK, Box 219, Albemarle, N.C. 28001.

CHARLOTTE, N.C. (center: intersection of South Boulevard and Woodlawn Road).

29 December. The number of *Wood Ducks* was high for the season and area. *Common Yellowthroat* (Doug Pratt) appeared for the first time on a winter count. *Brewer's Blackbird* (David and Jeff Wright) showed up for the second time inthree years. The find of the day was a late or over-wintering *Grasshopper Sparrow* (Lee Jones) flushed from a plowed field about a mile SE of Wither's Bridge on Catawba River bordering York County, S.C. The total number of species (83) is the highest ever recorded on a Charlotte Christmas Bird Count.—JOE AND BECKY NORWOOD, 1329 Goodwin Avenue, Charlotte, N.C. 28205.

GREENVILLE, S.C. (center: intersection of Hwy 29 and 291).

29 December.—ROSA LEE HART HARDIN (Mrs. W.B. Hardin Sr.), Cleveland, S.C. 29635.

ELKIN-RONDA, N.C. (center: 3 miles N of Elkin on US 21).

26 December. This is the first appearance of the *House Finch* and *Tree Sparrow* on the count day, but both have occurred during the count period in prior years.—LIN HENDREN, P.O. Box 148, Elkin N.C. 28621.

NORTH WILKESBORO, N.C. (center: North Wilkesboro).

28 December.—WENDELL P. SMITH, 911 E Street, North Wilkesboro, N.C. 28659.

CALDWELL COUNTY, N.C. (center: Lenoir).

28 December.—MISS HELEN MYERS, 310 Beall Street NW, Lenoir, N.C. 28645.

MOUNTAINS

AVERY COUNTY, N.C. (center: entrance to Grandfather Mountain toll road).

15 December. CORRECTION: In the table for the 1972 Christmas Bird Count (*Chat,* 37:9) Avery County should be listed as reporting 16 *Ruffed Grouse* and no *Sparrow Hawks.* Total individuals for these species should be changed to 331 Sparrow Hawks and 36 Ruffed Grouse.—MRS. JAMES PLYMIRE, Box 306, Linville, N.C. 28646, or R.D.2, Chestertown, Maryland 21620.

BUNCOMBE COUNTY, N.C. (center: intersection of US 70 and SR 2740, Swannanoa.)

15 December. *Snow Goose* (Hall family) was with a flock of Canada Geese in the

Fairview area, and its solid white body with black wing-tips made it conspicuous. The pink legs and bill could be seen as it flew low over Echo Lake. Three male *Northern Shovelers* (Halls) were on a small farm pond. *Merlin* (Halls) was seen both perched and in flight. *Saw-whet Owl* (Halls) was heard along Blue Ridge Parkway at 06:40. *House Wrens* are unusually abundant for this season, perhaps due to unseasonably warm weather. *Gray Catbird* (Halls) was in a multiflora rose hedge. *Tree Sparrows* (Halls) were in two flocks about 4 miles apart in the Fairview area. *Common Snipe* was fould near Chunns Cove by Plumer Wiseman of Danville, Virginia. *Rusty Blackbirds* (Halls) remained near the roost after other species had left; identified by call.–ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

BREVARD, N.C. (center: 7 air miles SE of Brevard, 0.5 mile N of intersection of US 276 and SR 1584).

29 December. Count day saw arrival of strong, wet weather front and receding waters from major flooding of French Broad River. *Mallards* (Susan Holland, Doris Guest) were feeding in flooded pastures. *Rusty Blackbirds, Brewer's Blackbirds, Common Grackle,* and *Brown-headed Cowbird* (Eloise Fenneberg, Mrs. R. Tish) were seen during passage of major weather fronts. *Swainson's Thrush* (Bill and Ellen Cook) was sighted regularly at a feeder from 8 November through 28 December.–WALTER HOLLAND JR., 290 Maple Street, Brevard, N.C. 28712.

GREAT SMOKY MOUNTAINS NATIONAL PARK, N.C.-Tenn. (Bull Head of Mt. Le Conte).

30 December.–DONALD H. DeFOE, Great Smoky Mountains National Park, Gatlinburg, Tennessee 37738.

FIELD OBSERVERS

BODIE-PEA ISLAND, N.C.: Robert Ake, Robert Anderson, Keith Fielder, John Fussell, Gilbert Grant, Harry LeGrand Jr., Paul McQuarry, Lynn Messinger, Norman Messinger, Wesley Messinger, Dwight Peake, Richard Peake, Grace Russell, Ross Silcock, Paul Sykes Jr., John Terborgh, Claudia Wilds, Gary Williamson, John Williamson, Mark Williamson. Boat courtesy of U.S. Coast Guard, Oregon Inlet. (Cape Henry Audubon Society and guests).

MOREHEAD CITY, N.C.: Clint and Doris Benbow, Judy Eubanks, John O. Fussell II, John Fussell III, Donna Goodwin, L.J.Klein, Joyce Lewis, Charles Lincoln, Chris Marsh, Darryl Moffett, David Morris, Mary Nicholson, Rebecca Norris, Bob and Mary Simpson, Clay Smith, Daniel Vaughn, E.W. Warner.

WILMINGTON, N.C.: Mrs. Cecil Appleberry, Bobby Austin, Robert Brown, J.H. Carter III, Mrs. Sam Earle, John Fussell, Haskell Hart, Kitty Kosh, Harry Latimer III, Harry LeGrand, A.G. Massey, Mrs. W.C. Mebane, Frances Needham, James F. Parnell, James Poteat, Charlotte Waggett, Pete Roberts.

LITCHFIELD-PAWLEYS ISLAND, S.C.: Jeannine Angerman, Calvin Clyde, Evelyn Dabbs, Betsy Eaddy, Dennis Forsythe, Jean Forsythe, Julian Harrison, Margaret Harrison, Pete Laurie, David C. McLean, David McLean Jr., Joe McLean, Mary Lou McLean, Stephen Meyers, Perry Nugent, Frederick Probst, Renee Probst, John Reed, Mary Reed, Smith Salisbury, John Schenk, Rebecca Schenk, Philip Stoddard.

CHARLESTON, S.C.: Bill Anderson, Jeannine Angerman, Ted Beckett, Alan Bills, E.B. Chamberlain, David Chamberlain, Norman Chamberlain, Calvin Clyde, John Dick, Dielle Fleischmann, Melanie Fleischmann, Sallie Fleischmann, Dennis Forsythe, Harry Freeman, Jim and Patty Fulcher, Devin Garrity, Tommy Graham, Betsy and Hilda Griffin, Margaret and Julian Harrison, T.F. Hassell, Kenneth Hough, Katherine Huger, Bobbin and David Huff, Stanley Langston, Peter Laurie, John Manzi, Isaac and John Metcalf, Perry Nugent, Robert and William O'Dell, Frederick and Renee Probst, John and Mary Reed, Jay Shuler, Arthur and Gayle Smith, Grant and LeAnn Staley.

HILTON HEAD ISLAND, S.C.: Frank Arnold, Gordon Benford, Doris and Seward Bowers, Nancy Butler, Nini Chapin, Marj Fowler, Billie Hack, John Hannold, David and Virginia Harrall, Dorothy Hitchcock, Helen and Royce Hough, Isabel Hurst, Charlotte and Edith Inglesby, Donald and Louise Lacoss, Mildred Lawrence, Helen Loriot, Imogene Lowden, Olin and Violet McIntosh, Caroline Newhall, Muggs Park, Helene Parry, Thomasia Phillips, Beryl and Kieth Pitcairn, Lois Pitcairn, Betty and Wallace Roy, Tommy Sasser, Mary Smith, Elizabeth and Robert Whitney.

BEAUFORT COUNTY, N.C.: Geraldine Cox, James McLaurin, Mary McLaurin, David Morris, Louise Satterthwaite, Mary Wilson.

SOUTHERN PINES, N.C.: Bobby Austin, Dana Carter, J.H. Carter III, Vera Chase, Laurence Davis, Roberta Davis, John Fussell, Harry LeGrand, Chris Marsh, Frances Needham, Lura Williams, Mary Wintyen, Ethel Wotton.

DILLON, S.C.: John H. Wilson.

ROANOKE RAPIDS, N.C.: Bill Collier, Betty Davis, Louis Fink, Louise Hutchinson, Cindy Johnson, Harry LeGrand, Merrill Lynch, Louise Parker, Gus VanVliet, John Wright.

HENDERSON, N.C.: Neita Allen, Mr. and Mrs. A.W. Bachman, Annie G. Burroughs, Mrs. Russell Parham, Mrs. Howard Stewart, Paul Stewart.

COLUMBIA, S.C.: Gilbert Bristow, John Hughes Cooper, Mary Desportes, Russell Green, Mrs. Blanding Guignard, Frank Hill, Johnny Kinsey, Jeanette Mahoney, Nina Reid, Eddie Rowland, Kay Sisson, Glenn Smith, Meta Smith, Emma Walker.

AIKEN, S.C.: Jeanne Angerman, Charles Braun, Jack Cooper, Fred Denton, Gerald Knighton, Vivian Poindexter, Tom Rial.

RALEIGH, N.C.: Betty and Lloyd Davis, Mrs. T.M. Donaldson, Louis Fink, John Fussell, Charlotte Hilton Green, R.J. Hader, Jeanne and Ray Halsey, Roberta Horton, Mabel Jones, Kenneth and David Knapp, William Lassiter, Joshua Lee, Harry and Edmund LeGrand, Chris Marsh, Edna Miller, T.L. Quay, Bob Smart, Mary Smith, Pat Sprunt, Elizabeth and Robert Teulings, David Whitehurst, Gail Whitehurst, Mrs. T.M. Wilson, Ray Winstead, John Wright.

DURHAM, N.C.: Jo Booser, Norman Budnitz, Caroline Carter, Robin Carter, Chip Chandler, Gil Ewing, Alexander Hull, Reed Kelley, Robert Klein, David Morris, Ted Nixon, Julie Ridgely, Robert Ridgely.

CHAPEL HILL, N.C.: Stanley Alford, Charles Blake, Annie Broughton, Elizabeth Calhoon, Forrest Calhoon, Angello Caparella, Caroline Carter, Robin Carter, Louise Crumpacker, Eric Garner, Lois Garner, Steve Hoverman, Isabelle Hoverman, Russell Hoverman, Paul Koepke, R. Koster, Edwin Lappi, Gertrude London, Johnnie Payne, James Pullman, Barbara Roth, Elizabeth Teulings, Kelsey Wager, Eleanor Wagstaff, Albert Walker, Ed Welch.

GREENSBORO, N.C.: Carolyn Allen, Donald Allen, Rose Avery, Virginia Bell, Helen Black, Edwin Blitch III, Carolyn Brown, Kenneth Brown, Madeline Cason, Eve Craft, Larry A. Crawford Jr., Charlotte Dawley, Frank L. Fish, Mildred Fish, Dot Garrett, Jean Gertz, Rebecca Greaves, Howard Groover, Ellene Kirk, Ellen Knight, Ben Lambeth, Kathryn Lambeth, Robert L. Lasley, James Mattocks, Jean McCoy, Ethel McNairy, Ida Mitchell, Beryl Norcross, Elizabeth Ogburn, Emma Leah Perrett, Etta Schiffman, Virginia Seawell, George Smith, Irene Smyre, Thomas E. Street, Marjorie Tays, William Tays, James Weigand, Daphne Weisner, Maude Williams, Helen Zuk.

WINSTON-SALEM, N.C.: Fran Baldwin, Olive Boice, William Boice, Zach Bynum, Charles Frost, Gardner Gidley, Margaret Gidley, Louise Gossett, Fred Hill, George Hill, Ruth Hill, Kevin Hintsa, Royce Hough, Jean Isenhower, Ike Isenhower, Hank Kudlinski, Kay Kudlinski, Janice Levitt, Ann Listokin, Mary McGehee, Sue Moore, Jim Orgain, Barbara Page, Ann Pollard, Susan Provost, Jackie Shelton, Mark Shelton, Dorothy Shiffert, Jerry Shiffert, Margaret Shirling, Ramona Snavely, S.C. Sommer, Paul Spain, Royce Weatherly, Bob Witherington.

IREDELL COUNTY, N.C.: Lois Goforth, Dwayne Hayes, Flippen Jones, Larry Marlin, Bobby Mize, Jane Mullen.

STANLY COUNTY, N.C.: Raymond Barker, Margaret Crawley, Barrett and Vera Crook, Virginia Foglia, Mattie Gereg, Terry Hahn, Vera Littleton, David McCarn, Bessie Morgan, Harold Morris, Ann Olsen, Taimi Olsen, Vivian Whitlock.

CHARLOTTE, N.C.: Dale and Josette Arvey, Elizabeth Clarkson, Teresa Cline, Bill and Flo Cobey, Adrian and Beth Dykema, Gina Elliott, Susan Ennett, Gwen Fenninger, David Frech, Jack Hamilton, Herbert and Martha Hechenbleikner, Lee Jones, Bobby Kluttz, Joe and Becky Norwood, Shuford and Katherine Peeler, Doug Pratt, Ed Read, Al Ross, Donald Rousar, David and Jeff Wright (Mecklenburg Audubon Society).

GREENVILLE, S.C.: Wilma Abrams, Mary Austin, Ruth Gilreath, Rosa Lee Hardin, Gladys Hart, Lillie Hart, Martha Lawrence, William Lawrence, May Puett.

ELKIN-RONDA, N.C.: Alex Biggs, Tim Bontecou, Tom Bryan, Gary Burchette, Herbert Cochran, C.C. Dudley, Gordon Getsinger, Elizabeth Harris, Virginia Hart, Lin Hendren, Ola Hendren, Tom Hendren, David Hasse, Lee Hasse, E.M. Hodel, Lewis Petree, Mike Randleman, William Roth, W.P. Smith, Jerry Tysinger.

NORTH WILKESBORO, N.C.: Louise Smith, Wendell Smith.

CALDWELL COUNTY, N.C.: Mrs. Glen Barnes, Mrs. Clarence Beach, Isabel Bernhardt, Mrs. Murray Bruner, Mr. and Mrs. C.G. Hughes, Mr. and Mrs. E.M. Manchester, Mr. and Mrs. Fred May, Helen Myers, Mr. and Mrs. Henry Parker, Mrs. C.S. Warren, Mrs. Dickson Whisnant, Joyce Bruner Whitman.

AVERY COUNTY, N.C.: Cecilia and Charles Burleson, Winston Church, Rip Collins, Hall family (John, Joy, Joyce, Mark, and Walter), Agnes Mayer, Hugh Morton, Dennis Myers, Margaret Plymire, Margery Plymire, Dick and Dixie Proctor, Sallie Southerland.

BUNCOMBE COUNTY, N.C.: Betty Ball, Robert Bruce, Dennis Carter, Wendell Cisco, Ken Durant, Margaret Finch, Joy Hall, Joyce Hall, Walter Hall, Easton Hulme, Lewis Kort, Meryle Kort, Gordon Mahy, Vauda Rauchwerger, Betty Ruiz, Robert Ruiz, Chris Rustay, Doris Sargent, Roland Sargent, Mary Sawyer, Joan Steeves, Plumer Wiseman, Thomas Wood, Vertice Wood.

BREVARD, N.C.: Eleanor Ashworth, Glenna Ball, Herbert Ball, Lydia Barrett, Paul Barrett, Len Berg, George Blaha, Mildred Blaha, Patrick Bohan, Rick Bohan, Lucille Cain, Bill Cook, Ellen Cook, Nell Cuthell, Louise Davidson, Owens Davidson, Eloise

Fenneberg, Connie Foster, Ercel Francis, George Francis, Dick Garren, Doris Guest, Frank Guest, Charles Haag, Velma Haag, Tom Hallowell, Byrniece Hansbrough, Ed Hansbrough, Curt Holland, Gail Holland, Susan Holland, Walter Holland Jr., Olive Hutchenson, Genevieve Lilly, Estle Lyon, Gaylord Lyon, Betty McIlwain, Walter McKelvey, Josephine Palmer, Dewitt Parsons, Helen Parsons, Wilson Peek, Elizabeth Provence, Donald Reese, Gladys Reese, Hazel Roberts, Hervey Roberts, Joe Schatz, Joyce Schatz, Lilian Scott, Glenn Snyder, Marge Snyder, Annette Sprott, Mrs. R. Tish, Claude Viens, Eleanor Viens, Doug Wauchope, Arthur Wood.

GREAT SMOKY MOUNTAINS NATIONAL PARK, N.C.-Tenn.: Winnifred Brown, James Campbell, Glenn Cardwell, Nancy Clark, Mary Francis Davidson, Don DeFoe, Jay DeFoe, Lori DeFoe, Shirley DeFoe, James Dingwall, Mildren Garrison, David Hassler, Robbie Hassler, J.C. Howell, Lucinda Ogle, Chester Massey, Debbie Massey, Eleanor Massey, Morton Massey, Terry McGown, Cynthia Muffly, Gary Muffly, Muriel Monroe, Louise Nunnally, J.B. Owen, Paul Pardue, Pauline Ryder, Boyd Sharp Jr., Mary Sharp, Nape Shelton, Johneta Smith, Louis Smith, Arthur Stupka, Margaret Stupka, George Wood, Hedy Wood, Bill Williams, Irene Williams, Dick Zani.

BOOK REVIEWS

KEY TO NORTH AMERICAN WATERFOWL. – Stephen R. Wylie and Stewart S. Furlong. Illustrated by Jack R. Schroeder. Livingston Publishing Company, 18 Hampstead Circle, Wynnewood, Pennsylvania 19096, 1972. 32 p. $3.95.

Printed on opaque plastic instead of paper, this sturdy waterproof booklet provides even the novice hunter with a means of identifying waterfowl before he shoots. In addition to color illustrations of the hen and drake at rest in winter plumage, it offers black-and-white flight drawings and silhouettes of the birds taking off from water. Text consists of size, weight, conspicuous color markings, flight patterns, food preferences, and habitat preferences. Color-coded symbols indicate relative abundance of each species in each flyway. While this book is of limited interest to the experienced bird watcher, it should be very helpful to hunters and more convenient to carry than the standard field guides. – EFP

LANDSCAPING FOR BIRDS. – Shirley A. Briggs, editor. Audubon Naturalist Society of the Central Atlantic States, Inc., 8940 Jones Mill Road, Washington, D.C. 20015, 1973. 62 p. Illus. Paperback, $1.75 ($2.00, postpaid mail orders; 40% discount for 10 or more copies).

This collection of seven informative articles that originally appeared in *Atlantic Naturalist* contains many practical suggestions for making city and suburban yards more attractive for birds by landscaping with plants that provide excellent cover, nesting sites, or natural food sources. Although the text does not use scientific names for plants, the index does, thus resolving any problems that may arise from regional variations in use of common names. After reading this booklet I added several new plants (barberry, bittersweet, and fragrant sumac) to my yard and began to view some established trees and shrub with new respect. If the mark of a good book is its making the reader take positive action, I must give this one my wholehearted endorsement. – EFP

General Field Notes

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Eared Grebe Collected at Wrightsville Beach, N.C.

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1 November 1973

The first recorded observation of an Eared Grebe (*Podiceps caspicus*) in North Carolina was at Wrightsville Beach on 13 December 1964 (*Chat,* 30:25-26). This bird was photographed but not collected. A bird seen by Micou Brown and Philip Warren on 31 December 1967 at Pea Island on the North Carolina "outer banks" (*Chat,* 32:45) was the second North Carolina record. On 25 April 1971 an Eared Grebe was seen by J.F. Parnell and others while conducting a spring bird count near Southport (*Chat,* 35:74-81). These three observations of single birds are the only published records for North Carolina prior to 4 March 1972. On this date Parnell and Soots discovered an Eared Grebe in the Inland Waterway adjacent to Wrightsville Beach. On 7 March 1972 the bird was collected. The skin is now number B282 in the collection of the Biology Department of the University of North Carolina at Wilmington. The bird was a male in the process of molting to the breeding plumage. The neck was essentially dark and the long tawny feathers that form the "ear" were obvious but not well developed. This is the expected plumage, as Palmer (*Handbook of North American Birds,* 1962, p.80) indicates that the molt begins in February and is completed in March or early April. On 28 March 1972 Carter discovered two Eared Grebes in Banks Channel at Wrightsville Beach about 1 mile from the site where the grebe was collected. On 29 March three Eared Grebes were seen there by Frances Needham (pers. com.), and on 30 March four were located there by Kitty Kosh and Dot Earle (pers. com.). A single bird was present until 10 April 1972 (pers. com., Frances Needham). The Eared Grebes were generally in the company of Horned Grebes (*P. auritus*) and Red-breasted Mergansers (*Mergus serrator*) and were quite easy to approach. Photographs of three of the grebes were secured by Parnell. All were in the process of molting to the breeding plumage and were easily separable from the nearby Horned Grebes.

This western grebe has been increasing in the eastern United States for several years. In 1966 Paul Buckley (*Audubon Field Notes,* 22:536-542) reviewed the status of the

Eared Grebe in the eastern Great Lakes and along the Atlantic Coast. He found about 30 pre-1957 sight records and about 130 records between 1957 and 1966. Since 1966 scattered records in the regional reports of *Audubon Field Notes* (now *American Birds*) indicate that this trend of increased numbers of Eared Grebes along the Atlantic Coast in winter and early spring has continued. The recent North Carolina observations fit into this pattern and suggest that this species may be expected along our coast more regularly in future winters.

Horned Grebes in Mutual Display During Northward Migration

JAMES M. POTTER JR.
P.O. Box 277, Zebulon, N.C. 27597

14 June 1973

The morning of 7 April 1973 the ocean off Kill Devil Hills, N.C., was perfectly calm. There were no breakers, and the surface was so flat and smooth that it reflected the sky. I scanned the water with a 30X Balscope, and as far as I could see up and down the shore and eastward toward the horizon the ocean was dotted with Horned Grebes *(Podiceps auritus),* mostly single birds in some stage of acquiring the nuptial tufts at the sides of the crown. Although the birds dived, bathed, preened, and rested, they were moving northward in an unhurried procession. As the birds that were at first directly in front of my position atop a sand dune moved out of sight to the north, more grebes steadily moved into view from the south. The birds generally ignored each other and remained spaced well apart, but two Horned Grebes were seen standing upright on the water face to face. Apparently in complete breeding plumage, they maintained this posture for a least a full minute, giving my wife ample opportunity to see the display. Neither Palmer (*Handbook of North American Birds,* Vol. 1, 1962) nor Bent (*Life Histories of North American Diving Birds,* 1919) mentions the occurrence of mutual displays among Horned Grebes during spring migration. Palmer (*Handbook of North American Birds,* Vol. 1, 1962, p. 76-77) says there is a slight suggestion from a few birds collected in Ontario that the male arrives on the breeding ground in advance of the female. My observation suggests that some birds seek mates during northward migration.

Third Sight Record of Great Cormorant from North Carolina

JACK POTTER and ELOISE F. POTTER
P.O. Box 277, Zebulon, N.C. 27597

10 April 1973

While driving eastward on the bridge across Croatan Sound between Manns Harbor, N.C., and Roanoke Island on the afternoon of 6 April 1973, we saw 100 or more Double-crested Cormorants *(Phalacrocorax auritus)* flying, fishing, and resting near the bridge. Two cormorants that seemed larger than the others approached from the north in flight, and Jack Potter noted a white belly on one of the birds. As the pair flew over the bridge directly in front of the car, Eloise Potter was able to see the light throat, cinnamon breast, and white belly of an immature Great Cormorant *(P. carbo).* We stopped at the end of the bridge, consulted our field guides (primarily *Birds of North America* by Robbins et al.), and agreed that we had seen an immature Great Cormorant well enough to be confident of its identity. The accompanying cormorant had dark underparts and is presumed to have been a Double-crested because we saw no white on the chin, belly, or thighs; however, the other bird may have been a subadult Great

Cormorant in second winter plumage (Basic II, Palmer's *Handbook of North American Birds,* p. 318).

According to Palmer's *Handbook,* the Great Cormorant winters regularly on the Atlantic coast of North America as far south as Long Island and casually southward to Florida, the longer migratory movements being made primarily by subadult individuals. There are two previous sight records of the species for North Carolina, both from the vicinity of Oregon Inlet. While participating in the Bodie-Pea Island Christmas Bird Count on 30 December 1970, H. Douglas Pratt saw an immature Great Cormorant flying over Oregon Inlet toward the ocean in the morning, and in the early afternoon Robert J. Hader and David L. Hughes saw what is presumed to have been the same bird in flight over the ocean a few miles south of the inlet (*Chat,* 35:22). Exactly one year later Richard H. Peake saw an immature Great Cormorant in flight along the shore of Bodie Island (*Chat,* 36:21). The bird seen at Croatan Sound constitutes the third independent sight record of the species for North Carolina and the first known spring occurrence in the state.

[Dept. Ed.—With the publication of this record this species can be placed on the official North Carolina list.]

Specimen of Harcourt's Storm-Petrel Found in North Carolina

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4 October 1973

On 22 June 1972, following the passage of tropical storm Agnes the previous day, I examined the flotsam along the drift line between Atlantic Beach and Beaufort Inlet in search of dead pelagic birds. Three Greater Shearwaters (*Puffinus gravis*) and one Harcourt's Storm-Petrel (*Oceanodroma castro*) were found.

The storm-petrel was later examined at the United States National Museum by Roxie Laybourne, who identified it as being the Atlantic subspecies, *Oceanodroma castro castro.* It was a female, ovary 3 mm x 2mm, and it has been placed in the study collection at the National Museum (USNM NO. 566873).

This is the first record of the Harcourt's Storm Petrel for North Carolina. The first record for South Carolina was made 2 days earlier, 20 June, when Jay Shuler captured a live specimen near McClellanville (*Chat,* 27:78).

Both the North and South Carolina birds were probably brought ashore by the strong easterly (onshore) winds that blew across the Carolinas from 19 to 22 June. These winds were the result of tropical storm Agnes which was located to the south of the Carolinas. The accepted range of the Harcourt's Storm-Petrel in the North Atlantic is the general area stretching from the Cape Verde Islands to the Azores and Canaries (Palmer, *Handbook of North American Birds,* 1962, p. 237-238). It is unlikely that Agnes influenced the weather east of Bermuda (see Weatherwise, 25:178-179). Thus, it is possible that the Carolina birds originated far west of their normally accepted range, perhaps only 300 to 400 miles or less off the coast.

[Dept. Ed.—With the deposition of this specimen in the National Museum, Harcourt's Storm-Petrel can be placed on the official North Carolina list.]

Forster's Tern Nest Found near Cape Lookout, N.C.

JOHN FUSSELL
North Carolina State University
Department of Zoology, Raleigh, N.C. 27607
4 October 1973

On 18 May 1973 I found a Forster's Tern (*Sterna forsteri*) nest near Cape Lookout, North Carolina. It was on a small island (approximately 150 feet by 150 feet) 1/3 mile W of Morgan Island, which lies immediately W of the Cape Lookout Channel about 2 miles S of Harkers Island. The island was covered entirely by *Spartina alterniflora* and would be almost completely flooded by high tides.

I was attracted to the island by two adult Forster's Terns in full breeding plumage that were sitting on a windrow of dry eel-grass *(Zostera marina)*. They flew up as I approached and began circling overhead, constantly uttering the diagnostic "zrurr" call. I found the nest on the mat of eel-grass from which the birds had flown. It consisted of a few dry pieces of *Spartia alterniflora* culms loosely arranged around a single egg. The egg was essentially identical to those of the Common Tern *(S. hirundo)*. It was 46 mm in length, was dark olive, and had numerous brown blotches of various shades.

This is the first positive nesting record of the Forster's Tern in Carteret County, although the species almost certainly nested at North River Marsh in 1971 (*American Birds,* 25:845), and possibly nested there as early as 1963 (personal observation).

Aspergillosis in a Royal Tern from Cape Romain National Wildlife Refuge, S.C.

LOUIS N. LOCKE, LAWRENCE J. BLUS, and EUGENE CROMARTIE
Bureau of Sport Fisheries and Wildlife, Department of the Interior
Patuxent Wildlife Research Center, Laurel, Maryland 20810
19 October 1973

Large numbers of Royal Terns (*Thalasseus maximus*) and Sandwich Terns (*Thalasseus sandvicensis*) nest on Marsh Island, Cape Romain National Wildlife Refuge, in the company of Brown Pelicans (*Pelecanus occidentalis*), Laughing Gulls (*Larus atricilla*), Willets (*Catoptrophorus semipalmatus*), Clapper Rails (*Rallus longirostris*), Snowy Egrets (*Leucophoyx thula*), and Louisiana Herons (*Hydranassa tricolor*). Royal Terns comprise about 90% of the breeding tern population, which has been doing very well. Reproductive success seems excellent, and there has been, as yet, no indication of eggshell thinning. By contrast, the local Brown Pelican population has undergone marked decreases, and the Patuxent Wildlife Research Center is currently investigating the cause of this decline.

During field studies on 13 May 1972, a dead Royal Tern was picked up on Marsh Island and was later submitted for necropsy (examination) and chemical analysis. The bird was an emaciated adult male, weighing 317 grams, with a prominent sternal keel. Moderate amounts of subcutaneous and abdominal fat were still present. All air sacs were thickened and contained several variously sized yellowish mycotic plaques (fungal growths); one plaque in the right thoracic air sac (10 x 8 x 3 mm) was greyish. Microscopically, it was a typical aspergillosis lesion and contained typical condiophores (asexual fruiting bodies) of *Aspergillus* sp. Sections of the lung contained similar, but much smaller, *Aspergillus* lesions. Although no attempt was made to identify the *Aspergillus* culturally, it is likely that the infection was caused by *Aspergillus fumigatus,* the most common cause of aspergillosis among birds.

Chemical analysis revealed only 0.20 ppm DDE in the brain. PCB brain levels were less than 0.5 ppm. The carcass contained 0.68 ppm DDE and 1.3 ppm PCB. No dieldrin, DDT, heptachlor, mirex, or chlordane derivatives were found in either the brain or the carcass. These values of DDE and PCB are all regarded as being far below the lethal concentrations for either chemical; in fact, this Royal Tern was surprisingly clean of pesticide residues.

Although aspergillosis is widely recognized as a cause of avian mortality, the disease does not appear to have been reported among terns. Chute et al. (*A Bibliography of Avian Mycosis,* Maine Agri. Exp. Station, Miscell. Publication 655, 1962) gave no references to aspergillosis among terns. The disease as seen in this Royal Tern is similar to the disease as it occurs in domestic poultry, waterfowl, and gulls.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates 1973 except as otherwise indicated)

COMMON LOON: An early fall migrant was noted on 22 August at Roanoke Rapids, N.C., by Merrill Lynch. In western North Carolina, an individual was found dead on the Blue Ridge Parkway between Asheville and Craggy Gardens in Buncombe County on 6 November by David Horton, as reported by Leon Carter who examined the specimen.

PIED-BILLED GREBE: An early fall visitor was sighted at Lake Hartwell near Clemson, S.C., 5 August by Sidney Gauthreaux.

SHEARWATERS AND STORM-PETRELS: Increasing interest in the species to be found offshore resulted in a series of six pelagic cruises to the Gulf Stream off the North Carolina coast during late summer and early fall of 1973.

18 August off Morehead City (Ake-DuMont party)
19 August off Hatteras (Ake-DuMont party)
20 August off Morehead City (Mattocks party)
2 September off Hatteras (Ake-Buckley-DuMont party)
16 September off Hatteras (Sonneborn party)
21 October off Morehead City (DuMont-Sykes party)

The party tallies are given below, listed in chronological order for each species:

Cory's Shearwater	33	294	54	82	45	18
Greater Shearwater	1	120	17	29	3	1
Audubon's Shearwater	0	42	14	2	1	1
Shearwater sp.	3	0	50	100	20	9
Leach's Storm-Petrel	0	0	0	0	2	0
Wilson's Storm-Petrel	26	59	45	92	100	0

Trip Leaders: Robert Ake, Paul Buckley, Paul DuMont, James Mattocks, David Sonneborn, Paul Sykes.

GREAT BLUE HERON: Merrill Lynch observed a flock of 48 at Roanoke Rapids Lake near Vultare, N.C., on 23 September.

GREAT EGRET: Summer and fall visitors were noted in several areas distant from known nesting localities. An individual summered at Umstead State Park near Raleigh, N.C., where it was seen regularly by park naturalist Nelson Chadwick between 1 July and 22 September. Nine were observed in a flock at Lake Hartwell near Clemson, S.C., on 5 August by Sidney Gauthreaux, an unusual count at that western piedmont reservoir. At least one was still present at the latter location as late as 9 October, reported by Harry LeGrand. Elsewhere, three were seen at Wildwood Lake, Caswell County, N.C., on 12 October by Fenton Day.

LOUISIANA HERON: One appeared at Umstead State Park near Raleigh in mid-July, lingering there until 5 September (Nelson Chadwick) and several were seen in late summer, 5 August through 16 September, in the Clemson area (Sidney Gauthreaux, Gene Hayes, Harry LeGrand).

GLOSSY IBIS: The second local record for Roanoke Rapids, N.C., was recorded on 1 August when eight were seen by Merrill Lynch, and another was found well inland on the Santee River near Rimini, S.C., on 29 September by Jeannine Angerman, Jay Carter, and Tom Rial. On 29 March 1972, a single bird was seen and photographed inland near Eden in Rockingham County, N.C., by Edward Burroughs.

WHITE IBIS: Fall wanderers were noted at two inland locations. Individuals were seen on 6 September at Lake Hartwell near Anderson, S.C., by Harry LeGrand, and at Wildwood Lake, Caswell County, N.C., on 9 September by Fenton Day.

BLUE GOOSE: An immature Snow Goose of the dark form was seen at Lake Benson in Wake County, N.C., on 16 November by Bruce Bolick, Jay Carter, Robert Hader, Edmund LeGrand, and Ray Winstead, the first local record. An adult and two immatures of this form were subsequently seen there on 28 October by John Fussell, Merrill Lynch, and Ray Winstead.

GREEN-WINGED TEAL: A very early fall migrant was seen at Raleigh on 11 August by Chris Marsh.

EUROPEAN WIGEON: A single male was seen at Pea Island N.W.R. on 23 September by James Pullman and again on 27 September by Jack Hagan.

CANVASBACK: A good count of at least 1,500 was recorded at Pea Island N.W.R. on 24 November by Edmund and Harry LeGrand.

OLDSQUAW: Eleven were locally uncommon visitors at Lake Wheeler near Raleigh, N.C., 1 December, observed by Robert Hader.

BROAD-WINGED HAWK: An immature male was found dead in the Lake Mattamuskeet area near Fairfield in Hyde County, N.C. , on 11 August by Stanley Alford and Angelo Capparella (specimen examined by Elizabeth and Robert Teulings). Two uncommon fall occurrences were also recorded along the immediate coast where individuals were seen at Huntington Beach State Park near Murrells Inlet, S.C., on 30 August by F.M. Probst and on Bodie Island, N.C., 10 November, by Gilbert Grant.

GOLDEN EAGLE: An adult was seen in the Charleston, S.C., area at Magnolia Gardens on 25 October by Ted Beckett. Perry Nugent also reported seeing a mature bird in the vicinity of the U.S. Agricultural Experiment Station near Charleston several times during October.

BALD EAGLE: One was seen near Columbia, S.C., on 7 August by Mary DesPortes, the first record for that locality since 1962 (fide Kay Sisson). Other individuals were noted at Raven Rock State Park on the Cape Fear River near Lillington, N. C., on 24 September (Howard Hodges) and at Kerr Scott Reservoir near North Wilkesboro, N.C., on 28 November (Louise Smith). Three additional fall sightings were also reported from coastal locations. All birds seen were adults.

PEREGRINE FALCON: Single birds were observed at three inland North Carolina locations during the fall season:

Pilot Mountain	4 October	Charles Frost, Ruth Hill, Ramona Snavely, Robert Witherington
Raleigh	7 October	Ken Knapp, Chris Marsh
Fort Bragg	1 December	Tim Vogel

Along the coast four sightings were reported from the Outer Banks and one from the Charleston area.

MERLIN: An early coastal sighting was recorded on 22 August at Huntington Beach State Park, S.C., by F. M. Probst.

BLACK RAIL: One was found dead at the WECT-TV tower near White Lake in Bladen County, N.C., on 3 October by Jay Carter.

AMERICAN GOLDEN PLOVER: Various observers noted small numbers along the North Carolina Outer Banks from late August through early October with a peak count of five recorded at Pea Island on 6 October by Edmund LeGrand and Sebastian Patti. An inland migrant was noted at Clemson, S.C., on 14 September by Harry LeGrand.

RUDDY TURNSTONE: A rare inland occurrence was noted in Northampton County, N.C., where an adult in almost complete breeding plumage was seen on 2 August at a Gaston construction site by Merrill Lynch.

LONG-BILLED CURLEW: One was found on 25 August at Ocracoke Inlet on the North Carolina Outer Banks by Gilbert Grant. Another sighting of possibly the same bird was subsequently recorded 3 September at Ocracoke Island by Harold Wierenga.

UPLAND SANDPIPER: Two coastal migrants were seen at Sullivan's Island, S.C., on 24 August by Z.T. Ralston and G. Staley; three at the Wilmington, N.C., airport on 3 September by Kitty Kosh; four at the Salvo campground on Hatteras Island, N.C., on 4 September by Harold Wierenga; and three at the Wright Memorial, Kill Devil Hills, N.C., on 1 September by the latter observer.

BAIRD'S SANDPIPER: A single bird of this scarce species was closely observed by Gilbert Grant on the North Carolina Outer Banks at Ocracoke Inlet on 25 August.

DUNLIN: Uncommon occurrences were noted at several inland sites during the fall season. In the Raleigh area, Robert Hader noted five on mud flats at Lake Benson on 3 November. At least four were present at Lake Hartwell near Clemson, S.C., 4 through 11 November, observed by Sidney Gauthreaux, Gene Hayes, and Harry LeGrand. A first record for Orange County, N.C., was established on 9 November when a single bird was found at a small farm pond near Chapel Hill by Stanley Alford and Angelo Capparella, confirmed by James Pullman.

LONG-BILLED DOWITCHER: Over 100 were counted at Pea Island on the North Carolina Outer Banks 5 September by Paul Buckley.

BUFF-BREASTED SANDPIPER: An early fall migrant was present at Huntington Beach State Park on the South Carolina coast 19 through 24 August, reported by F.M. Probst. Another was found inland at Gaston in Northampton County, N.C., on 23 August by Merrill Lynch. Others were seen in the Bodie-Pea Island, N.C., area through September with a high count of 16 recorded at the Wright Memorial on 2 September by Jay Carter.

HUDSONIAN GODWIT: Reports indicated small numbers were present in the Bodie-Pea Island area from early September through mid-October. The peak number seen was five recorded by Paul Buckley and other observers at the Bodie Island lighthouse pond on 2 September.

AMERICAN AVOCET: A rare inland occurrence was recorded at Raleigh, N.C., where an individual was found at Lake Raleigh on 3 August by Chris Marsh.

RED PHALAROPE: Three were seen during a pelagic cruise off Cape Hatteras on 16 September by David Sonneborn.

WILSON'S PHALAROPE: Several fall sightings were reported from the North Carolina Outer Banks where two migrants were seen at Pea Island on 2 September by Gilbert Grant, two in the same locality 23 September by James Pullman, and one at Ocracoke Island on 8 October by Paul DuMont and Paul Sykes.

NORTHERN PHALAROPE: Four were seen in the Gulf Stream area off Cape Hatteras by Paul DuMont and party on 2 September, and 15 were seen in the same waters by David Sonneborn during an offshore cruise on 16 September.

POMARINE JAEGER: One was seen along the beach at Nags Head, N.C., 15 September by David Sonneborn. Other sightings of single birds were recorded offshore from Oregon Inlet on 2 September by Paul DuMont and party and on 16 September by David Sonneborn. Another was seen off Morehead City, N.C., on 21 October by Paul DuMont, Paul Sykes, and party.

PARASITIC JAEGER: One was seen in waters off Oregon Inlet on 16 September by David Sonneborn. Another was seen at Bird Shoal near Morehead City, N.C., on 22 September by John Fussell. Three were observed at Buxton, N.C., on 3 November by James Parnell and Jay Carter.

LESSER BLACK-BACKED GULL: Two were found and photographed at Ocracoke Island on the North Carolina Outer Banks on 6 October by Richard Rowlett.

LAUGHING GULL: An inland wanderer was sighted at Lake Benson, Wake County, N.C., on 26 October by T.L. Quay.

BLACK-LEGGED KITTIWAKE: A bird in immature plumage was seen on the North Carolina Outer Banks at Hatteras Inlet on 4 October by P.A. and F.G. Buckley.

BRIDLED TERN: The following offshore sightings were reported along the North Carolina coast during late summer and early fall:

4	18 August off Morehead City	Paul DuMont et al.
11	2 September off Hatteras	Paul DuMont and party
8	5 September at Diamond Shoals light	P.A. and F.G. Buckley
7	16 September off Hatteras	David Sonneborn

FORSTER'S TERN: Approximately 1,000 were counted at Bird Shoal, Morehead City, N.C., on 22 September by John Fussell.

COMMON TERN: An estimated 9,000 were present at Bird Shoal, Morehead City, on 22 September, observed by John Fussell. Three were seen inland at Roanoke Rapids Lake near Vultare, N.C., on 23 September by Merrill Lynch.

CASPIAN TERN: An inland count of five was recorded at Roanoke Rapids Lake near Vultare, N.C., on 23 September by Merrill Lynch.

BLACK TERN: A large flock of at least 1,000 was seen at Folly Beach, S.C., on 23 September by Sidney Gauthreaux and Harry LeGrand.

BLACK SKIMMER: John Fussell observed a large aggregation of some 2,000 birds at Bird Shoal off Morehead City, N.C., on 26 November.

EASTERN KINGBIRD: A flock of 132 migrants was counted at Buxton, N.C., on the Outer Banks on 4 September by Harold Wierenga; 78 were recorded at Morehead City, N.C., 7 September by John Fussell.

GRAY KINGBIRD: A fall visitor was closely observed at Pea Island N.W.R. on 3 September by Harold Wierenga and several other observers.

WESTERN KINGBIRD: Two individuals were seen in the Bodie-Pea Island, N.C., area on 1 September by Ricky Davis. Later sightings of single birds were recorded in that locality on 13 October by Gilbert Grant, on 20 October by Paul DuMont, and on 10 November by Gilbert Grant. Elsewhere along the coast, two were found in the Morehead City, N.C., area on 2 November by John Fussell, and one was seen at the Belle Baruch Plantation, Georgetown, S.C., on 18 November by H. Freeman.

BANK SWALLOW: Fall migrants were noted 4 August at Lake Wheeler near Raleigh, N.C., by Chris Marsh and 9 August in Richland County near Columbia, S.C., by John Cely.

COMMON RAVEN: One was seen in the South Carolina foothills near Salem in Pickens County on 28 October by Sidney Gauthreaux. The continued presence of the species at Pilot Mountain State Park in Surry County, N.C., is confirmed by the sighting of two birds there on 4 October by Ramona Snavely, Robert Witherington, et al.

BROWN CREEPER: One recorded on 7 September in Caswell County, N.C., by Plumer Wiseman was an unusually early fall occurrence.

RUBY-CROWNED KINGLET: An early fall visitor was seen at Wilmington, N.C., on 19 August by Kitty Kosh.

PHILADELPHIA VIREO: One was seen at Pea Island, N.C., on 2 September by Merrill Lynch, Ross Silcock, and Chris Marsh. Elsewhere two migrants were observed at Winston-Salem, N.C., on 11 October by Fred Hill.

GOLDEN-WINGED WARBLER: Fall observations of single birds were recorded on 11 September at Clemson, S.C., by Harry LeGrand; 17 September at Winston-Salem, N.C., by Fred Hill; 23 September at Poinsett State Park in Sumter County, S.C., by Robert Teulings; and 23 September at Folly Beach, S.C., by Sidney Gauthreaux and Harry LeGrand.

BLUE-WINGED WARBLER: An early and uncommon fall migrant was seen on 18 August in Moore County, N.C., near Pinebluff by Jay Carter and Elizabeth Teulings. A coastal transient was recorded at Pea Island, N.C., 19 September by David Sonneborn.

TENNESSEE WARBLER: Fall migrants were recorded at Clemson, S.C., as late as 2 November by Harry LeGrand.

NASHVILLE WARBLER: An unusually late visitor was recorded at Raleigh, N.C., on 27 November by Gail Whitehurst.

BLACKBURNIAN WARBLER: An early transient was seen near Southern Pines, N.C., on 18 August by Jay Carter.

BLACKPOLL WARBLER: Two very late migrants were seen on 1 December at Winston-Salem, N.C., by Charles Frost and Barbara Page.

HOODED WARBLER: A 30 October sighting was recorded at Umstead State Park near Raleigh, N.C., by Nelson Chadwick.

KENTUCKY WARBLER: A 27 October sighting was recorded at Carolina Beach, N.C., by Ricky Davis.

CANADA WARBLER: One was found very late at Sumter, S.C., on 24 November by Evelyn Dabbs.

CONNECTICUT WARBLER: Reported fall sightings were of an individual observed on 20 September at Winston-Salem by Ramona Snavely and another at North Wilkesboro, N.C., on 25 October by Wendell Smith.

YELLOW-HEADED BLACKBIRD: One was present among a mixed flock of grackles and cowbirds at John Beeler's feeder at Guilford College, N.C., on 2 October, fide Charlotte Dawley.

SAVANNAH (IPSWICH) SPARROW: One was seen at Carolina Beach, N.C., on 27 October by Ricky Davis.

HENSLOW'S SPARROW: Several were discovered on 17 November and observed on subsequent dates through winter at a reservoir site near Rocky Mount, N.C., by Betty Davis, Lloyd Davis, and Louis Fink.

CLAY-COLORED SPARROW: An individual in immature plumage was seen by Paul Sykes and Paul DuMont on the North Carolina Outer Banks at Pea Island on 7 October. Another was observed in the same area on 13 October by Gilbert Grant.

WHITE-CROWNED SPARROW: A fall visitor was seen at Raleigh as early as 7 October by Chris Marsh. Occurrences were also reported by other observers during the fall period from seven additional inland and coastal locations:

Carolina Beach, N.C.
Clemson, S.C.
Huntington Beach, S.C.
Morehead City, N.C.
North Wilkesboro, N.C.
Northampton County, N.C.
(Occoneechee Neck area)
Pea Island, N.C.

LINCOLN'S SPARROW: One was seen well on 18 November near Townville, S.C., by Sidney Gauthreaux and Harry LeGrand.

(Continued on page 3)

Carolina Bird Club
INC.

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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from State and Federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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The Chat

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Vol. 38 June 1974 No. 2

The Chat

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OUR COVER—Fred L. Johns photographed a Burrowing Owl collected on the Outer Banks of North Carolina in February 1967. For a report of a second Burrowing Owl in North Carolina, see page 41 in this issue. John Henry Dick contributed the drawing of a Yellow-crowned Night Heron that appears on page 46.

RELATIVE CONTRIBUTIONS OF MALE AND FEMALE PURPLE MARTINS TO FEEDING OF YOUNG

JOSHUA A. LEE

Widmann (1922), quoted by Allen and Nice (1952), found that in a colony of 16 pairs of Purple Martins, females delivered 55.5% of the food items over a period of 16 hours of continuous observation. I could find no evidence that Widmann's data were ever subjected to statistical analysis, so there is no way of knowing the role played by experimental error in determining the outcome. However, the contribution of females seems sufficiently robust to lead one to believe that the difference between feeding rates of the sexes was, indeed, significant. Moreover, there is some question as to whether the males worked at a normal rate, since most of Widmann's broods consisted of two or three young, well below average for martins.

Casual observations at my colony in Raleigh, N.C., have led me to believe that male and female martins contribute equally to feeding of young, particularly if broods are large. I have recorded brood sizes ranging from one to eight, with a modal number of six. However, in the larger broods it is rare for more than four to survive until old enough to leave the nest. Earlier I showed that adult birds, those 2 years old or older, reared an average of 3.4 young per nesting attempt over a multi-year span (Lee, 1967).

Broods in the spring of 1973 were larger than usual, and nesting among pairs synchronous to a higher degree than in the past 3 years. Thus it seemed an excellent opportunity to study in more depth the role of the sexes in supplying food to young.

PROCEDURES

Four pairs, each with broods of six, were selected for study. The broods ranged in age from 4 to 7 days at the beginning of the observations. All parents were believed to be adult birds, since the males were black, and the females in question arrived along with their mates in March and early April. Sub-adult birds commonly arrive 3 to 4 weeks after adults have settled (Allen and Nice, 1952; Lee, 1967). These martins were housed in gourds about 8 inches in diameter suspended about 15 feet above the ground.

No efforts were made to mark the parents for purposes of identification. However, at least one member of each pair was naturally marked in some way, such as broken flight feather, gap in tail, or differences in breast color of females. None of the naturally marked birds were observed to engage in promiscuous feeding, so there was reason to believe that this source of potential bias was not present.

Total time of observation was 5 hours. This was broken into 10 periods of 30 minutes scattered through the diurnal span, from 23 May through 31 May. Half the time blocks were after 17:00 hours, but there was one before 09:00, and one during the noon hour.

Data were taken on the number of food deliveries by each parental bird during the 5-hour span. All young survived to the end of the experiment, but a few were noticeably retarded in growth, suggesting that they would probably succumb, eventually, to competition.

RESULTS AND DISCUSSION

The unprocessed data are given in Table 1. A total of 352 prey items were delivered during the 20 pair-hours of observation. Thus each brood received food, on the average, every 3.4 minutes. The highest rate of feeding was recorded between 12:30 and 13:00 on 31 May when 54 total prey items were delivered. This time block also saw the highest

TABLE 1. Food deliveries by pairs over blocks of time.

	Block Number										Total items by sex, within pairs
	1	2	3	4	5	6	7	8	9	10	
Pair number											
1 male	3	3	7	3	4	2	5	4	10	2	43
female	3	3	5	2	2	7	4	3	5	2	36
2 male	7	2	3	2	7	2	5	3	7	4	42
female	5	4	2	3	3	2	4	5	5	3	36
3 male	5	4	3	4	3	3	6	3	7	2	40
female	4	5	5	3	1	5	8	3	6	9	49
4 male	7	4	5	7	4	5	5	4	8	3	52
female	7	6	5	4	7	5	4	4	6	6	54
Total items per block	41	31	35	28	31	31	41	29	54	31	352

rate of delivery by an individual when Male 1 brought in 10 dragonflies. The lowest rate was recorded between 08:00 and 08:30 on 25 May when only 28 items were procured. The lowest yield per bird, per time block, was by Female 3 between 17:30 and 18:00 on 25 May, when she delivered 1 butterfly (*Vanessa* sp.)

If the contribution of pairs over all time blocks is taken as the primary observation, and the contribution of sexes within the various pairs as a secondary observation, the data can be analyzed as the contribution from a split plot experiment with 10 replications (time blocks). The detailed statistical anaylisis is given in Table 2.

Under effects deriving from the primary observation, differences between pairs was not significant at the 5% level, but approached significance. This result may be interpreted to mean that pairs of martins with broods of six, over the age range of 4 to 15 days, work with equal, or nearly equal, effort to keep their broods fed.

The difference between deliveries per block was significant. This is not suprising since martins are likely to capture prey in relation to its abundance, and insect activity is apt to vary over the diurnal span. For example, two periods were at dusk when large numbers of a big mayflies were brought in. Each of these blocks yielded 41 items. The noon-hour of 31 May was the most productive of all with 54 items, 48 of which were dragonflies, indicating a time of high activity for this favored prey. It is, of course, possible that martins are more active at certain times of the day for reasons not related to available food supply.

Evidently the age of young did not relate directly to rate of food procurement. The time block data were recorded in Table 1 in the precise order taken, and the procurement rate is not linear over the 5-hour span.

Under effects deriving from secondary observations, the performance of pairs was not significantly different with males procuring 177 items to 175 for females.

As for interaction of primary and secondary effects, comparison of the relative productivities of sexes within each of the pairs led to no detectable difference. Thus it may be that some pairs work harder than others, but within a given pair male and female seemed to work with equal effort over the 5-hour span.

Did males and females work with equal effort within each of the time blocks? Perhaps not, since the sexes by period interaction approached significance at the 5% level. My observations suggest that parents do not coordinate their activities to any great extent when feeding young. At times both are very active, at other times neither is, and occasionally one or the other is busily bringing in food. Examination of the data in Table 1 will reveal the evidence for this conclusion. Perhaps a given parent feeds the young

TABLE 2. Analysis of the feeding data.

Sources of variation	Sums of squares	Degrees of freedom	Mean Squares	F ratio	Significance level
Pairs	25.30	3	8.43	2.91	0.10 – 0.05
Periods	72.70	9	8.08	2.78	0.05 – 0.01
Pairs by period (Error 1)	78.20	27	2.90		
Sexes	0.05	1	0.05	0.00	NS
Sexes by pair	8.45	3	2.82	1.41	NS
Sexes by period	38.45	9	4.27	2.12	0.10 – 0.05
Sexes by pair by period (Error 2)	54.05	27	2.01		

until it becomes hungry, thirsty, or tired. After refreshment it commences feeding the young once more.

The only evidence of coordinated activity was noted when both parents approached the nest with food. In every case the male deferred to the female, allowing her to enter the nest first. In fact the male would defer to his mate when she was 10 to 15 feet from the nest and he was closer. While I don't comprehend the significance of this behavior, it does suggest that a given male can recognize his mate from a distance.

In summary, four pairs of martins with broods of six each, ranging in age from 4 to 7 days at the beginning of the experiment, were observed for a total time of 5 hours, broken into 10 time intervals of 30 minutes each, scattered through the diurnal span. During this time males and females supplied virtually equal numbers of prey items. While food gathering activities were not equal in all time blocks, the sexes performed equally well, though some pairs may have gathered more food than others. These martins delivered food at what I consider a high rate, at 3.4-minute intervals, and males and females apparently performed with equal vigor.

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5104 Newcastle Road, Raleigh, N.C., 17 October 1973.

ROOSTING BEHAVIOR OF STARLINGS IN NORTH CAROLINA

PAUL A. STEWART

During the period 1965-1973 I made observations on the roosting behavior of Starlings (*Sturnus vulgaris*) in northcentral North Carolina, particularly in Henderson and Oxford and in the surrounding farm areas. Some of these observations contribute toward improvement in understanding the roosting behavior of these birds and are herewith reported. This report involves Starlings roosting in association with Rock Doves (*Columba livia*) and House Sparrows (*Passer domesticus*). The roosting behavior of Starlings in association with congregations of American Robins (*Turdus migratorius*), Red-winged Blackbirds (*Agelaius phoeniceus*), Common Grackles (*Quiscalus quiscula*), and Brown-headed Cowbirds (*Molothrus ater*) will be considered in a separate paper.

METHODS

This paper is based chiefly on observations obtained simply by watching and following the birds at appropriate times. A Gossen Panlux Foot-candle Meter was used in determining light intensities for correlation with times of entering and leaving roosts. Light meter readings were made with the sensitive probe aimed directly toward the zenith.

DEGREES OF GREGARIOUSNESS

Large roosting congregations of Starlings are so prevalent, so conspicuous, and so much publicized that it is easy to suppose that these birds roost only in large congregations. However, I found Starlings roosting individually and in small groups even when others roosted nearby in small groups or in large congregations, respectively. For example, several Starlings roosted individually in separate crevices of old buildings in Oxford during September 1972 when a small group of 15 to 20 Starlings roosted on the water tower less than 200 yards away. At the same time a mixed group of blackbirds and Starlings roosted less than a mile from the group on the water tower. Another group of 5 to 10 Starlings roosted in a dense tree with a group of 20 to 25 House Sparrows less than a half mile from the mixed congregation. Still another two Starlings roosted at the same time in association with 15 to 20 House Sparrows in a tree at a farmstead 6 miles from Oxford and the roosting congregation. Starlings rarely roosted individually, except in cavities or crevices. However, late in the evening of 21 September 1973 a Starling left other birds on the Oxford tower and went to an exposed perch on a church steeple about 600 yards from the tower, and it remained for the night on the steeple. Davis (1970) noted that Starlings in Illinois roosted during the winter in small groups in natural cavities and in buildings.

The birds sometimes went to two roosting sites the same night, usually but not always remaining with the larger number of birds. Thus, during the late summers of 1972 and 1973 when 5,000 to 10,000 Starlings roosted at Henderson with a mixed congregation of blackbirds, many more Starlings regularly came to the Oxford tower than remained there. The birds leaving the tower usually flew in the direction of Henderson, 12 miles away. At least a small group of Starlings remained throughout the year to roost on the Oxford tower. The visiting of two roosting sites the same evening suggests that nightly selections of roosting sites were made by at least some birds. This is in marked contrast with observations made by Kalmbach (1932), indicating that even the same perches were used by Starlings on successive nights.

ROOSTING ASSOCIATES

Except when roosting alone, usually in crevices of buildings, I always found Starlings roosting during the late summer, fall, and winter in association with other species of birds. At two sites already mentioned, Starlings roosted in association with House Sparrows. Rock Doves were roosting associates in three groups, including the small group regularly using the Oxford tower. Two other Rock Dove-Starling congregations roosted in old buildings, one in an unused tobacco curing shed at the edge of Oxford and one in an unused factory building in Henderson. The Oxford site was used during the spring and summer by as many as several hundred Starlings; the Henderson site was used during the winter by about 5,000 Starlings. I found no species other than Starlings roosting in association with Rock Doves.

In roosting congregations of mixed species, Starlings always appeared to be followers, with birds of another species leaders. The leader species normally could be recognized by its being first in spring and summer evenings to enter roosting sites or by its more consistent use of sites throughout the year. Two roosting sites used in association with Rock Doves were used much more consistently by Rock Doves than by Starlings; hence, Rock Doves were responsible for perpetuating use of the sites and thus for initiation of seasonal congregations of Starlings. In one case where a tree was used by Starlings in association with a small group of House Sparrows, the sparrows used the tree for roosting before being joined by the Starlings.

Although Starlings always seemed to be followers in use of roosting sites, they sometimes greatly outnumbered the species acting as leader. During the winter of 1965-1966 the 5,000 Starlings roosting in the old factory building in Henderson were led by about 125 Rock Doves. In that Starlings follow Rock Doves in use of roosting sites, there is presumably some attraction to the Starlings in the presence of the Rock Doves. However, on the Oxford water tower the Starlings roosted separately, the Rock Doves roosting exposed on side rails above a ledge around the bottom of the tower and the Starlings roosting somewhat concealed on the metal posts supporting the tank. Some Starlings thus roosted 5 or more yards from the Rock Doves. Thus, the Starlings were attracted by the presence of the pigeons but forced to find appropriate roosting perches apart from the Rock Doves.

ENTRANCE INTO ROOST

With small groups of Starlings, going to roost was an extremely casual event, early entrance into the roost not being strongly separable from other movements. In eight evenings during the late summer of 1973, Starlings first went to the Oxford tower and entered their roosting places 95 to 138 (mean 119.5) minutes before sunset. Other scattered individuals and groups of several birds soon followed after entrance of the first bird. Often the first birds to go to their roosting perches did not remain there but later flew to the ground where they fed or to nearby perches where they merely waited. However, some birds usually remained on the tower after arrival of the first bird. Thus, at these roosts that ultimately came to contain only a few birds, actual entrance into the roost normally started about 2 hours before sunset. During six evenings the birds largely discontinued going to the tower 40 to 21 (mean 32.4) minutes before sunset; thereafter, they moved about on the tower seeking roosting perches or left the tower, flying toward the Henderson roost.

ENTRANCE INTO ROOST RELATIVE TO LIGHT INTENSITY

With Starlings' entrance into the roost spread over more than an hour, during part of which time the light intensity was steadily declining, it is difficult to comprehend how this activity can be correlated with light intensity. Also, light measurements showed that some birds entered their roosts at light intensities from 3,200 to 20 foot-candles, with most entering between 3,200 and 340 foot-candles. Nice (1935) and Jumber (1956) reported close correlation with light intensity and entrance into their roosts by Starlings, but these authors worked with large congregations in which individuals had their behavior influenced by roost associates. In such congregations entrance into the roost is greatly delayed by pre-roost gatherings outside the roost, with entrance into the roost finally somewhat forced by impending nightfall. Starlings being of diurnal habits normally enter their roosts before nightfall, giving added correlation of entrance into the roost and light intensity.

VOCALIZATION AT ROOST

Even with only 10 to 20 Starlings in a roosting group, some vocalizations were given both in the morning and evening. The vocalizations involved only single birds at any one time, given mostly in the evening after the birds had settled on their roosting perches. Vocalization of roosting Starlings thus is not confined to birds in large congregations. However, because of the large numbers of voices involved in large congregations, vocalization with them is a very conspicuous feature.

DEPARTURE FROM ROOST

On six days the first Starling left its roosting place on the Oxford tower 2 to 17 (mean 8.5) minutes before sunrise. Although only a few birds were involved, departure of all birds extended over a relatively long period. On 21 September 1973, the first bird left the Oxford tower at 06:45 (DST), and the last bird left at 07:08, with 23 minutes required for departure of only 11 birds. Ten to 16 Starlings spent 14 to 29 (mean 20.4) minutes in full evacuation of the roost.

The first Starlings left their roosting perches on the Oxford tower at light intensities from 9.5 to 16.0 (mean 13.7) foot-candles. By the time the last bird had left, the light intensity had increased to 88 to 124 (mean 109.5) foot-candles. Thus, the light intensity varied from 9.5 to 124.0 foot-candles during the time birds were leaving their roosts. As with the entrance into the roosts in the evening, morning departure of Starlings showed no close correlation with light intensity.

SUMMARY

Throughout the year Starlings were found roosting individually and in small groups apart from large congregations of blackbirds. The birds often went first to sites used by only a few birds but left before nightfall to join large congregations. However, some birds normally remained to form small groups. Except when they roosted alone, Starlings always roosted as followers in association with another species as a leader. Rock Doves and House Sparrows were leaders at some sites. Rock Doves as leaders were sometimes greatly outnumbered by Starlings as followers. Entrance into the roost started about 2 hours before sunset, birds at first doing much going to and from their roosting perches or cavities. Entrance into the roost was largely completed about 30 minutes before sunset. Even with only about a dozen birds in a roosting group, departure of all birds extended over about 20 minutes. During entrance into the roost, incident light intensity declined from 3,200 to 20 foot-candles, with most birds entering the roost at light intensities above 340 foot-candles. During departure from the roost light intensity increased from 9.5 to 124.0 foot-candles. With entrance into and departure from the roost proceeding through a wide range of light intensities, lack of correlation with roosting movements and light intensity was strongly indicated. Limited vocalization took place even at roosts containing fewer than a dozen birds.

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203 Moreland Drive, Oxford, N.C. 27565, 24 September 1973.

CBC Roundtable

... with Louis C. Fink

Doomsday for the Bald Eagle?

I visited Lake Mattamuskeet Wildlife Refuge to film the Bald Eagle, and the trip proved futile. John Davis, Refuge Manager, explained that there was not a pair of Bald Eagles nesting in the current year. There were two eagles nesting in 1971, but only one bird returned to the Refuge in 1972. An authority at the Pea Island Wildlife Refuge reports no nests in Dare County for several years.

Apparently, Bald Eagles are either transient visitors to eastern North Carolina, or they nest on private land. The danger of this is revealed by the report of eagles discovered by a logging crew. Tracked down, the crew foreman said that he had cut down the tree containing the nest.

The Backbay Wildlife Refuge in Virginia reports that the eagles are losing their foothold there.

It has been suggested that DDT is the largest factor in the reduction of the Bald Eagle population. Surely, destruction of its natural habitat is second in line. –JAMES F. HOLLINGSWORTH JR., Goldsboro, N.C.

No Bald Eagle Nests Here?

The annual survey by the Fish and Wildlife Service indicates 627 active nests of the Bald Eagle producing 500 young in 1973. No active nests were found in North Carolina; two in South Carolina produced one young bird. The survey covered the 48 States (eliminating Alaska); allowing for nests not found, there may be 1,000 active nests in the territory.

Additions to Wilderness Areas

Hearings have been held on the desirability of including in the National Wilderness Preservation System: 660 acres within the Mattamuskeet National Wildlife Refuge; 9,000 acres within Swanquarter Refuge; 180 acres within Cedar Island; and 180 acres within Pea Island. Wilderness does not alter an area's status as a Wildlife Refuge.

Information, Please!

The crows in the Rocky Mount area are evident enough, but remarkably silent. When I do hear one, it seems to give the call of a Fish Crow, but all my reference works say this is a bird of tidewater. Rocky Mount is close to the Fall Line, but the Tar River is hardly affected by tides. Does any reader have information on the range of the Fish Crow away from the coast in North Carolina?

Bird-finding

PUNGO NATIONAL WILDLIFE REFUGE, N.C.–This is 12,000 acres of marsh, timber, and farms, including the 2,800 acres of Pungo Lake. It was established in 1963 to provide winter habitat for Canada Geese, puddle ducks, and swans. Wood Ducks nest here, and wading birds are common. Deer, black bear, and other mammals are to be found.

At last reports, development of the Refuge for visitors had been delayed, but the last time I was there a good dirt road enabled cars to travel completely around the lake. It should be a good observation point for spring and fall migrations.

From Plymouth on U.S. Route 64, drive south on State Route 32 for five miles, then State 99 for 12 miles. You'll come to a road which leads to the Refuge.

Chickadee Acrobatics

City Lake, Rocky Mount, N.C., 6 March 1974.–Last summer, House Wrens nested in a broken lamp post. Today, two Carolina Chickadees flew in and out of the cavity, *removing* nesting material. The lamp is covered on top with a shield, about the size and shape of an inverted dinner plate. One of the chickadees grasped the edge of this metal shield with its feet, its body facing away from the cavity. Hanging upside down, the bird looked back over its shoulder to watch the work of the other chickadee. It was a performance worthy of Ringling Brothers.

General Field Notes

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Osprey Migration at Wrightsville Beach, N.C.

J.H. CARTER III
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20 November 1973

On 4 October 1971, while conducting a shorebird census at the south end of Wrightsville Beach, N.C., I observed a heavy migratory movement of Ospreys (*Pandion haliaetus*). In 2 hours and 10 minutes (16:00 to 18:10), I counted 90 Ospreys moving southward. Most were in small flocks and were soaring very high. The wind was from the north, and the sky was mostly overcast. On 1 October, Hurricane Ginger had moved past Wrightsville Beach and made landfall near Morehead City. The first day with northerly winds following the storm was 4 October, the day the Ospreys were seen.

Robert Needham (pers. com.) reported seeing several Ospreys over the Cape Fear River near Smith Island on the morning of 4 October, and it is possible that the Ospreys were moving south in large numbers throughout the day.

Sandhill Cranes in Onslow County, N.C.

GRADY L. BARNES
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Raleigh, N.C.
20 August 1973

On 25 November 1970, three Sandhill Cranes (*Grus canadensis*) were seen in a harvested Soybean field neal Stella in Onslow County, N.C. The three cranes were feeding in a field owned by Percy Morton and located about 200 to 300 yards from the White Oak River Waterfowl Impoundment. Two of the cranes remained in the vicinity for about 2 weeks while the third disappeared earlier.

[This appears to be the second record of Sandhill Cranes in North Carolina, the first being a record of two birds taken in Robeson County in 1957 (*Chat*, 22:45, 1958). – Dept. Ed.]

Spring Shorebirds at a Drained Farm Pond Near Chapel Hill, N.C.

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30 August 1971

Several small farm ponds near my home, just SE of Chapel Hill, N.C., customarily attact a few Spotted Sandpipers during the spring migration, but no other transient shorebirds have been noted on these ponds in 6 years of study although Solitary Sandpipers are fairly common in the vicinity.

In late April 1971, one of these ponds, roughly an oval measuring 100 by 300 feet was partially drained for cleaning and restocking. Within a week, it was clear that something unusual was happening. My observations are summarized in the following table:

Species	*Extreme Date*	*Maximum No. Individuals*
Spotted Sandpiper	20 April – 1 June	7
Solitary Sandpiper	23 April – 23 May	13
Greater Yellowlegs	21 April – 5 May	2
Lesser Yellowlegs	23 April – 7 May	9
Least Sandpiper	26 April – 16 May	5

Other records included several visits by an Osprey, and a rather late Blue-winged Teal on 10 May.

None of these species is truly rare in this area, but it is interesting to compare the above figures with the maximum total individuals which have been recorded during the 14 previous Chapel Hill Spring Bird Counts (averages in parentheses): Spotted Sandpiper 26 (8), Solitary Sandpiper 8 (4), Greater Yellowlegs 1 (0), Lesser Yellowlegs 0, and Least Sandpiper 0.

Shorebird habitat is scarce around Chapel Hill, especially in spring when ponds and lakes are well filled. It is significant that these birds so quickly availed themselves of a fortuitous occurrence, and a student of inland shorebirds would do well to search for similar circumstances.

[The irregular but sometimes spectacular occurrence of shorebirds at inland sites is most interesting and certainly indicates a more general passage than usually recognized. See reports of similar occurrences by Carter (*Chat,* 32:102) and Mattocks (*Chat,* 33:24-25). –Dept. Ed.]

Little Gulls at Cape Hatteras, N.C.

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5 January 1974

On 10 March 1973, the authors observed three Little Gulls (*Larus minutus*) at the tip of Cape Hatteras, near Buxton, N.C. The birds were feeding over the ocean with a large flock of Bonaparte's Gulls (*Larus philadelphia*). The Little Gulls appeared slightly smaller than the Bonaparte's Gulls in flight. Two of the Little Gulls were immatures, and the third was an adult in winter plumage. The distinctive field marks of the immatures (dark crown patch, tail band, and dark wing-stripe) were repeatedly noted at close range by both authors. The adult was easily distinguished in flight by the very dark underwing. Although the weather was foggy, Parnell obtained recognizable photographs of an immature Little Gull.

This rare European gull has been recorded regularly at several locations in the northeastern states for several years, and it is becoming increasingly regular along the mid-Atlantic cost in winter. There are four previously published records for North Carolina. Single individuals were seen at Roanoke Rapids on 29 August 1971 (*Chat,* 36:30), offshore of Pea Island on 30 December 1971 (*Chat,* 36:22), at Bodie Island on 1 October 1972 (*Chat,* 37:31), and again at Bodie Island in December 1972 (*Chat,* 37:16).

Discovery of a Burrowing Owl Near Morehead City, N.C.

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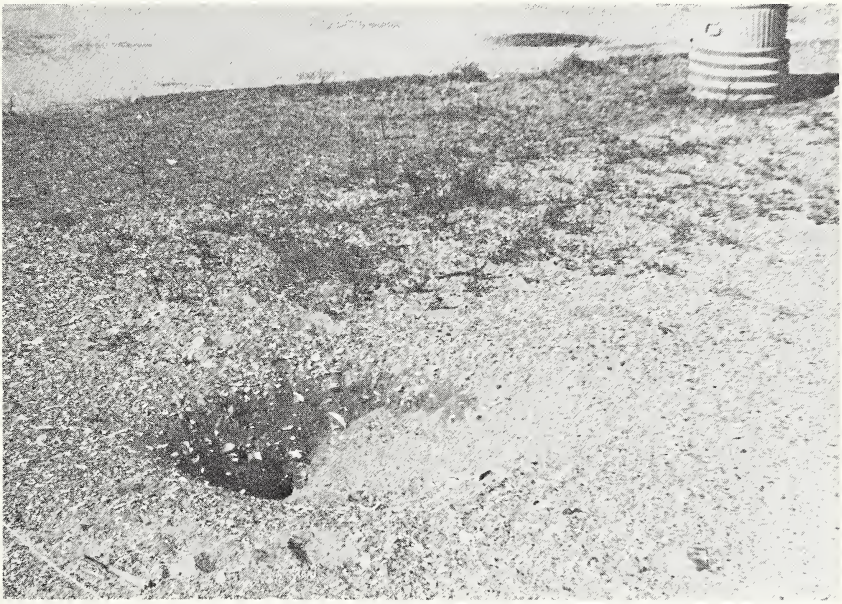
22 January 1974

On 13 June 1972, while conducting a tern and skimmer nesting census on a large dredge spoil island (Brant Island) 1 mile NW of Ft. Macon, the writers saw what they believed to be a Burrowing Owl (*Speotyto cunicularia*). However, it was seen only briefly and in poor light, so they decided not to report the sighting.

After three trips to the island during the next 2 months, Fussell again found the bird in question on 26 August 1972. It was flushed at very close range and then watched through 10 x 50 binoculars for several minutes at a distance of about 100 feet. All field marks were noted as the owl bobbed up and down while scolding the observer. At the point where the owl flushed, there was a horizontal section of abandoned dredge pipe which lay beneath a small dune so that both ends of the pipe were exposed. Around the pipe ends were many footprints, so it appeared that the dredge pipe was the owl's burrow.

Fussell found the owl again on 2 September 1972, and it was shown to Harry and Edmund LeGrand on the following day. It has not been seen on subsequent visits.

These observations represent the second record of the Burrowing Owl in North Carolina. The first record was made at Salvo on the Outer Banks where an individual was present from about 14 November 1966 until 14 February 1967 when it was collected by Paul Sykes (in press, *Auk*, 91). That bird was found to be *Speotyto cunicularia floridiana*, the race resident in Florida. Because the Ft. Macon bird was not collected or captured, its subspecies remains unknown.



The Burrowing Owl collected by Sykes near Salvo in February 1967 was flushed from the hole shown above. The burrow appeared to be an enlarged ghost crab excavation. (Photo by Fred L. Johns)

Additional Information on the Red Crossbill Breeding in the Lower Piedmont of North Carolina in 1967

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15 January 1974

The erratic wanderings of the Red Crossbill (*Loxia curvirostra*) are well documented (Griscom, 1937; Bent, 1968). Griscom emphasized the difficulty in determining racial identity of some individuals because of the complicated taxonomy; birds in the southern Appalachians posed a particular problem. Pearson, Brimley, and Brimley (1942) list two subspecies for North Calolina, *L. c. pusilla* and *L. c. bendirei,* the former considered to be the breeding bird in the Smoky Mountains, while the *A.O.U. Check-list* (1957) gives *L. c. minor* as the breeding race in this area.

From one to eight Red Crossbills were present in the vicinity of Raleigh, Wake County, N.C., from 12 March (Jones, Browne, and Lewis, 1967) to 6 May 1967 (Hader, 1969). On this latter date I collected three crossbills on the north shore of Lake Johnson on the southwest side of the city as they fed on cones of loblolly pine (*Pinus taeda*) at an estimated height of 21 m. The first published account of these birds that I collected was by Hader (*Ibid.*) in his annotated list of birds of Wake County. The specimens are now in the collection at the U.S. National Museum. The three birds were an adult male and female and a juvenile female. The gonads of the male were almost destroyed by shot pellets. The adult female was in breeding condition. Examination of the ovary after it had been preserved in 70% alcohol showed one ruptured follicle, and the three largest ova were 9.0, 4.7, and 2.6 mm. The juvenile showed practically no ossification in the parietals and frontals and the tips of the mandibles were barely crossed. The juvenile bird was probably still being fed by the parents, although this was not witnessed in the field. Harrison B. Tordoff examined the juvenile and estimated it to be about 5 weeks old. In view of the degree of bill development and age of the bird, it is believed to have hatched in the general vicinity of Lake Johnson, for it probably was too young to have moved in from a more distant location.

Measurements for the three specimens are given in Table 1. Allan R. Phillips examined the three specimens and identified them as *L. c. benti.* This form is currently the race recognized as breeding in the Rocky Mountains and western edge of the Great Plains (*A.O.U. Check-list,* 1957).

Although no nest was found, the breeding condition of the female and the presence of a juvenile with an uncrossed bill and skull not yet ossified constitute evidence of breeding in the general vicinity of Raleigh. This area, with elevations ranging from 98 to 152 m above mean sea level, is in the lower piedmont. The costal plain lies 48 km (30 miles) E and 16 km (10 miles) S. The nearest known breeding crossbills are in the Great Smoky Mountains National Park (Stupka, 1938), 402 km (250 miles) W. Johnston (1963) and others watched a female, accompanied by a male, carrying nesting materials on two occasions near Highlands, Macon County, on 27 July 1963, but did not locate the nest. More recently, LeGrand (1971) noted birds in northern Wake County on 23 and 30 May 1970 and at William B. Umstead State Park 3.7 km NW of Raleigh as late as 17 June in 1970. He suspected but found no actual evidence of breeding in that area. Also in 1970, Carter (1971) had crossbills in the central Carolina Sandhills in the upper coastal plain as late as 2 June, but no breeding activity was noted.

This report is the third record strongly indicating the breeding of Red Crossbills in North Carolina, although through the years there have been numerous sightings throughout the spring, summer, and early fall. An actual nest of this species has not yet

TABLE 1. Measurements of three specimens of the Red Crossbill collected near Raleigh, N.C., in 1967 (weigh in g, other measurements in mm).

					Bill		
Specimen	Weight	Wing	Tail	Tarsus	Length	Depth	*Width
Adult male USNM 565199	36.1	93.5	57.0	16.3	17.9	10.2	U 8.2 L 10.9
Adult female USNM 565197	38.1	89.5	51.5	16.0	17.3	9.9	U 8.0 L 10.0
Juvenile female USNM 565198	36.1	87.0	51.0	15.2	12.8	8.5	U 7.7 L 7.3

*Measurements taken at base of bill. U = upper mandible, L = lower mandible.

been found in the state. Breeding in central Wake County probably represents an isolated case of breeding displacement rather than a range extension.

I thank Roxie C. Laybourne for measurements of the specimen meterial and helpful suggestions on the manuscript, Harrison B. Tordoff for aging the juvenile bird, and Allan R. Phillips for subspecific identity of the specimens.

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Fledgling Red Crossbills at Newfound Gap

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4 December 1973

On Monday, 14 June 1965, Beth Lacy, 3129 McClure Lane, Knoxville, Tennessee 37920, and I spent the day in the vicinity of Clingman's Dome, Indian Gap, and

Newfound Gap. It was early afternoon when we sat down on the stone wall at the Newfound Gap parking area (on the old road across the mountain) at the North Carolina end of the wall. We had been there only a few minutes when we saw a Red Crossbill alight on the bank (a road-cut) across the road from us. It collected food and flew into the evergreen tree almost over our heads. On a limb sat two fledgling birds, side by side. On another limb in the same tree, but at some distance, was another fledgling. All three fledglings were fed by the parents, and at no time while we watched, did the young ones fly. The mandibles of the young were not crossed. We reluctantly left the area after searching for the nest and observing the birds for about half an hour.

Red Crossbill Observations in Western North Carolina

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15 December 1973

The Red Crossbill (*Loxia curvirostra*) is an uncommon to rare erratic resident through much of the southern Appalachian mountains. The majority of records have come from the Great Smoky Mountains (Stupka, 1963), and observations from other locales are infrequent. The paucity of breeding evidence and the infrequency of large concentrations make the following records significant.

SHINING ROCK LEDGE (Haywood County, N.C.)

On 13 June 1970, I spent 2 hours watching a pair of Red Crossbills as they constructed a nest in a 30-foot red spruce (*Picea rubens*) at Shining Spring (elevation 5,740 feet) just S of Shining Rock Gap. During most of the period, the male perched near the top of the spruce and uttered various call notes and songs, while the female carried small twigs to the loosely formed nest, which was located 12 feet from the ground in the mid-canopy of the tree. Whenever I approached the nest, both birds quickly became agitated and gave alarm notes repeatedly. The nest was apparently still in the construction stage, and no eggs or young were found. After leaving the site, I saw flocks of 15 to 20 crossbills at Ivestor Gap (5,700 feet) and at Shining Rock (6,000 feet). Much to my regret, I was unable to return to this isolated locale at a later date to determine whether the breeding had continued.

Stupka (1963) and Johnston (1963) have reported evidence for breeding by the Red Crossbill in the southern Appalachians. Stupka's records were of adult birds feeding young with uncrossed mandibles, while Johnston's observations were of adults carrying nesting material. In neither instance, however, was a nest actually found. Although no eggs or young were present in the nest which I found under construction at Shining Rock, the record does give additional evidence that the Red Crossbill breeds in the southern Appalachian mountains.

BLACK MOUNTAINS (Buncombe and Yancey Counties, N.C.)

Outside the Great Smoky Mountains, Red Crossbills have been reported most frequently in the Black Mountains, although the species is rather erratic and published records are few (Simpson, 1972). During the autumn of 1969, however, large flocks were present at five widely separated locales through the range, where the birds were found in forests of red spruce and Fraser fir (*Abies fraseri*). In most cases, the flocks were mixed, consisting of adult males, adult females, and heavily streaked juveniles.

The first records were on 7 September at Blackstock Knob (5,600 feet) along the Blue Ridge Parkway, where I saw a small flock of five birds. My subsequent records at this spot included 50 crossbills on 13 September, 10 on 18 October, and 25 on 28 November. At Mt. Hallback (6,200 feet) 12 crossbills were present on 18 October. At the observation tower on Mt. Mitchell (6,684 feet) I saw 20 on 18 October; and a flock of over 75 was present on 28 November. The largest concentration, however, was at Steepes Gap (6,100 feet) near the Mt. Mitchell State Park Office building, where I counted over 100 crossbills on 18 October. John R. Wilson (pers. com.) informed me that this flock, often numbering over 150 birds, was seen daily at Steepes Gap from early October until the first heavy snow in early December 1969. Wilson subsequently informed me that flocks of 50 to 75 crossbills appeared in September 1970 and again remained until a heavy snow near the end of November 1970. Wilson reported that the flocks seen in 1969 and 1970 were unusually large, although the pattern of occurrence was typical of other years, with the birds first appearing between July and September and steadily increasing in numbers until the first heavy snows around late November or early December, when the flocks rapidly disappeared.

Stupka's (1963) summary of crossbill records from the Great Smokies indicates that flocks in excess of 100 birds are most ususual, with the majority of reports consisting of no more than 60 birds. The flock of 100 to 150 crossbills at Steepes Gap in the Black Mountains represents an exceptionally large concentration of the birds, which were seen daily for a period of some 6 weeks. The relatively mild weather and large seed crops in 1969 may have contributed to the size of these flocks.

PISGAH RIDGE MOUNTAINS (Transylvania, Haywood, and Henderson Counties, N.C.)

To my knowledge, there are no published records of Red Crossbills from this range, despite the presence of apparently suitable habitat. Don R. McLeod (pers. com.) reported a pair of adult crossbills at Devil's Courthouse (5,700 feet) in June 1959, although he was unable to find any evidence of nesting. On 14 February 1970, I saw a flock of 25 in flight at nearby Silvermine Bald (5,800 feet); while on 15 May 1970, 5 were at Fork Mountain Tunnel (4,900 feet), 30 were at Little Pisgah Ridge Tunnel (4,800 feet), and 25 were at Mt. Pisgah (5,200 feet). On 6 June 1970, a pair of adults was seen at the Pisgah Campground along the Blue Ridge Parkway (4,900 feet); but I could find no evidence of nesting.

In the Great Smokies, Stupka (1963) reports that Red Crossbills are at their lowest numbers during the month of May, making these Pisgah Ridge sightings unusual with respect to the time of year.

On subsequent visits to Shining Rock Ledge, the Black Mountains, and Pisgah Ridge during 1971 and 1972, I saw no Red Crossbills in any of these locales, a fact which reinforces the statement that this species should be designated as an *erratic* resident through most of the southern Appalachian mountains.

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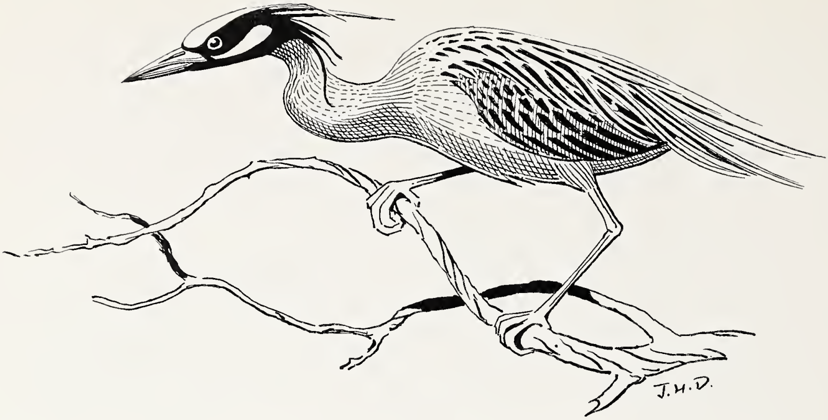

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates winter 1973-1974)

COMMON LOON: Up to four were present through the winter on Lake Hartwell in the vicinity of Clemson, as reported by Harry LeGrand. Winter occurrences also were noted inland at Roanoke Rapids Lake, Halifax County, N.C., where 18 were counted on 1 December by Merrill Lynch, and at Lake Wheeler near Raleigh where individual sightings were recorded on 24 February and 3 March by Ken Knapp.

EARED GREBE: Two were studied at close range off the Coast Guard Station at Oregon Inlet, N.C., on 24 February by Robert Ridgely.

GREAT CORMORANT: An immature was well observed at Pea Island N.W.R. on 1 December by Gilbert Grant.

CATTLE EGRET: At least five were resident through the winter at Pine Knoll Shores golf course on Bogue Bank near Atlantic Beach, N.C., observed by John Fussell. Others apparently wintered in Currituck County, N.C., where 45 were seen in the Grandy-Jarvisburg area on 31 December by Gary Williamson and Gilbert Grant and at least four were still present on 2 February.

GREAT EGRET: One was seen inland near Raleigh on 17 March by Ken Knapp.

GLOSSY IBIS: Sightings of two wintering birds were recorded through the season at North River marsh near Morehead City, N.C., by John Fussell. Three also were seen at Fort Macon by the same observer on 26 January.

WHISTLING SWAN: A locally rare winter occurrence was noted in the Raleigh area where a single bird was seen at Umstead State Park on 13 February by Nelson Chadwick. Merrill Lynch reported three present during February at Roanoke Rapids Lake, Halifax County, N.C.; and five were found near Clemson, S.C., on 14 February by Sue Broadbent and Ann McLauchlin. Uncommon local sightings also were reported from Moore County, N.C., where three birds were seen near Aberdeen on 13 December and one at Lake Surf near Vass on 14 March by Jay Carter.

BRANT: Thirty-five were seen at Hatteras Inlet and 14 in Pamlico Sound at Ocracoke, N.C., on 17 February by Richard Rowlett and Berit Edsburg.

SNOW GOOSE: Peak winter population at Pea Island N.W.R. was estimated at nearly 12,000, Jack Hagan. Well inland, an individual of the blue form was seen on Lake Hartwell near Townville, S.C., on 11 January by Gene Hayes.

FULVOUS TREE DUCK: A major winter invasion brought flocks of up to 80 into the Beaufort, S.C., area (Cornelia and Charles Chapin), 60 to Santee N.W.R. (Chas. Strickland, fide John Cely), and 50 to Magnolia Gardens at Charleston (Ted Beckett). A number of sightings also were reported from coastal North Carolina including flocks of up to 22 at Davis (Fred Barkalow and Thad Cherry, 10 February), 10 at Cape Hatteras (Clay Gifford), and 4 at Pea Island N.W.R. (Jack Hagan, 9 February).

PINTAIL: A small wintering flock was present through late February on Lake Hartwell at Townville, S.C., where a peak count of 20 was recorded on 18 January by Gene Hayes.

REDHEAD: Small numbers were noted as uncommon winter visitors at several inland locations. Six were seen on Lake Hartwell near Townville, S.C., on 27 January by Gene Hayes; eight were seen on Salem Lake near Winston-Salem, N.C., on 21 March by Fran Baldwin, Charles Frost, Ramona Snavely, and party; and two were seen on the Dan River in Caswell County, N.C., on 1 March by Plumer Wiseman.

CANVASBACK: Twenty were a locally unusual find near Winston-Salm on 21 March by Ramona Snavely and party. A good inland count was also recorded at Lake Surf near Vass, N.C., where seven were seen on 14 and 16 March by Jay Carter, Chris Marsh, et al.

COMMON EIDER: Either a female or immature male was present at Sullivan's Island, S.C., during early January, as reported by Dennis Forsythe and Perry Nugent.

COMMON MERGANSER: Three were seen at Lake Gaston, Warren County, N.C., on 3 January by Henry Haberyan. Elsewhere, two were seen in South Carolina at Cape Romain N.W.R. on 16 March by Perry Nugent, and another near Winston-Salem, N.C., on 20 March by Charles Frost.

MISSISSIPPI KITE: An unexpected winter-period occurrence was reported by Perry Nugent, who saw a single bird near Charleston, S.C., on 24 February.

BROAD-WINGED HAWK: One was early at Clemson, S.C., on 31 March, Sidney Gauthreaux.

ROUGH-LEGGED HAWK: A light-phase individual was seen 9 December near Eden, N.C., by Carol and Edward Burroughs, and a dark-phase bird was observed at Umstead State Park near Raleigh on 9 March by David Whitehurst.

BALD EAGLE: December sightings of single adults were recorded at Roanoke Rapids Lake, Halifax County, N.C., by Merrill Lynch and at Lake Mattamuskeet, Hyde County, N.C., by Michael Tove. In South Carolina two adults wintered in the Savannah River Atomic Reservation near North Augusta, reported by Tom Murphy; and another adult was present in early March at Lake Keowee in Oconee County, observed by C.R. Dillon.

OSPREY: A winter sighting was recorded inland at Clemson, S.C., 19 January by Harry LeGrand.

PIPING PLOVER: Over 100 were counted at Bird Shoal off Morehead City, N.C., on 20 December by John Fussell.

AMERICAN GOLDEN PLOVER: Five were at Pea Island N.W.R., 12 January, observed closely by Henry Haberyan.

RED KNOT: A tally of 236 at Ocracoke Island, N.C., on 24 February was seasonally noteworthy, Gilbert Grant.

PECTORAL SANDPIPER: One was seen at Lake Surf near Vass, N.C., on 2 December by Jay Carter.

RED PHALAROPE: An estimated 200 were seen on 6 December in waters five miles off Charleston, S.C., by Peter Laurie.

PARASITIC JAEGER: An onshore sighting of a single bird in light-phase plumage was recorded at Edisto Beach, S.C., on 19 January by Dennis Forsythe.

GREAT BLACK-BACKED GULL: An uncommon winter visitor in the Charleston area was seen at South Island on 6 January by Ted Beckett.

LAUGHING GULL: A mid-winter sighting of a single bird was recorded 24 January at Hammocks Beach near Swansboro, N.C., by Robert Teulings and five were seen in the Atlantic Beach, N.C., area on 9 February by John Fussell.

BONAPARTE'S GULL: Good numbers were present during January at Lake Gaston, Warren County, N.C., where a peak count of 59 was noted on 14 January by Henry Haberyan. Thirty were counted at Lake Hartwell in the Clemson, S.C., area on 2 December and some were seen there sporadically through the winter, as reported by Harry LeGrand.

LITTLE GULL: Two birds, both in adult winter plumage, were seen at Pea Island, N.C., on 24 February by Robert Ridgely.

BLACK SKIMMER: A flock of 30 was seen at Cape Hatteras, N.C., 18 February by Richard Rowlett and Berit Edsburg, an unusual winter season occurrence for the northern coastal area.

LONG-EARED OWL: An individual was again noted this season at North Wilkesboro, N.C., where it was heard calling on 8 March by Wendell Smith.

PURPLE MARTIN: One was found unusually early at Morehead City, N.C., on 17 February by John Fussell, and another early individual was seen at East Lake, N.C., on 23 February by Robert Ridgely.

BEWICK'S WREN: One was an unexpected visitor at Lake Surf near Vass, N.C., on 2 December, Jay Carter.

SWAINSON'S THRUSH: A rare winter occurrence was recorded at Charleston, S.C., where an individual was seen on 20 January by Perry Nugent.

WHITE-EYED VIREO: One was seen 20 January at Pendleton, S.C., by Harry LeGrand, an unusual winter record for the western piedmont.

CAPE MAY WARBLER: A well-marked male appeared at Mrs. E.M. Thompson's feeder in Raleigh, N.C., on 27 February and was seen there regularly through 12 March, fide Robert and Elizabeth Teulings.

BREWER'S BLACKBIRD: A female was carefully identified among a flock of Red-winged Blackbirds and Common Grackles at Magnolia Gardens near Charleston, S.C., on 5 January by Dennis Forsythe.

WESTERN TANAGER: An individual in female plumage was present during the first week of January at Jo Clark's feeder in New Bern, N.C.

INDIGO BUNTING: A very early male, molting into breeding plumage, turned up at a feeder at Hilton Head, S.C., on 1 March, Louise Lacoss.

PAINTED BUNTING: An adult male was noted by G.E. McGrew at his feeder in Camden, S.C., 12-13 January, and a pair were present through most of January and February at Kay Zippler's feeder in North Augusta, S.C. Single males were seen at two different locations in the Beaufort-Morehead City, N.C., area in December, one bird remaining through the winter, fide John Fussell.

COMMON REDPOLL: Three were seen at the Bodie Island, N.C., lighthouse on 9 February by Ken Knapp. A later sighting of two was noted at the same location on 26 March by Bill Williams.

DICKCISSEL: A feeder visitor was noted by Ethel Wooton at Southern Pines, N.C., where it was regularly present from 5 February through early March. Another was seen at Charleston, S.C., by Chris and Perry Nugent at their home on 28 March. Sidney Gauthreaux and Harry LeGrand twice observed an individual in the Pendleton, S.C., area, 3 February and 17 February.

GRASSHOPPER SPARROW: Two were seen near Eden, N.C., on 27 December by

Ross Silcock. Single birds were seen near Townville, S.C., on 26 January and 10 March by Harry LeGrand.

HENSLOW'S SPARROW: Several were found in open pinewoods near Bolton in Brunswick County, N.C., on 15 through 17 December by Jay Carter, John Fussell, and Harry LeGrand. Two also were found at Bulls Island, S.C., by Perry Nugent on 16 March.

WHITE-CROWNED SPARROW: Reports of this species wintering in good numbers in the Carolinas were highlighted by counts of 40 in Anderson County, S.C., on 2 December by Harry LeGrand and 25 in Wake County, N.C., in the Lake Raleigh area on 24 February by Ken Knapp.

LINCOLN'S SPARROW: One was observed near Bolton in Brunswick County, N. C., on 15 December by Harry LeGrand.

LAPLAND LONGSPUR: Five reported on the Southern Pines Christmas Count at Lake Surf (*Chat,* 38:14) were still present 16 March, observed by Chris Marsh and party. On the North Carolina coast, three were seen at Cape Hatteras on 2 December by Gilbert Grant, and a later sighting of five was noted in that locality on 18 February by Richard Rowlett and Berit Edsburg.

BOOK REVIEWS

The World of the Wood Duck

F. Eugene Hester and Jack Dermid. J.B. Lippincott Company, Philadelphia and New York, 1973. $5.95 160 p. Index. Illus.

The latest is the series of Living World Books edited by John K. Terres, *The World of the Wood Duck* was written and illustrated with a generous number of photographs by two North Carolinians who need no introduction to CBC members. Aside from the expected life history facts arranged according to the four seasons, the book contains many highly readable stories about the relationship of these beautiful birds to people, including an account of breeding Wood Ducks at the home of Mr. and Mrs. Edwin O. Clarkson in Charlotte. Material on the protection and propagation of the Wood Duck includes instructions for making and placing nest boxes. This is an attractive and informative book that will appeal to hunters and bird watchers alike. Unfortunately the modest price did not permit the publisher the luxury of a full-color reproduction of one of Jack Dermid's stunning Wood Duck portraits.–EFP

The Dictionary of American Bird Names

Ernest A. Choate. Gambit, Boston, 1973. $6.95. 261 p.

This dictionary at first glance seems to duplicate the recently released *Words for Birds* by Edward S. Gruson, but the two books are radically different in arrangement of material and general point of view. The Gruson book presents the species in *A.O.U. Check-list* order, and its strong point is the lively biographical sketches of the men and women for whom birds have been named. The Choate book has an alphabetical listing of common (and some colloquial) names, an alphabetical listing of scientific names by genus, an appendix of biographical data, a bibliography, and an English/Latin glossary. Serious bird students probably will find the latter treatment more to their taste even though categories above the level of genus are not included. –EFP

Adventures in Birding—Confessions of a Lister

Jean Piatt. Alfred A. Knopf, Inc., New York, 1973. $7.95. 265 p. Chapter headpieces by Matthew Kalmenoff.

I wrote this book 10 years ago. Unfortunately, I didn't have Dr. Piatt's (his research field is embryology) life list of 666 North American birds, his puckish sense of humor, his skill with pointed literary references, his precise vocabulary ("uxoriousness" of phalaropes, the "crepuscular" auklets, the "hubris" of arrogant man, the "only voyager in the Ark educated beyond his intelligence"), and his absorbing way with a story of bird-finding in Alaska, the Tortugas, or his own backyard.

Only two chapters of my book were ever published. You read all 265 spicy pages of Dr. Piatt and wish for a sequel.

Everybody who has kept his own life list will want to quote this book to his friends:

On the A.O.U. Check List: "hiss the 'lumpers' and applaud the 'splitters,' as all good listers do."

On species: "A species is anything the taxonomists say it is."

On coyotes: "If every town had more coyotes and less people, the world would be a a much safer place in which to live."

On "music" in national parks: "Among the several million idiocies perpetrated by the human animal, amplified, cacophonous noise deluging the countryside is one of the least forgiveable. Aural pollution is as serious as air or water pollution."

On people who profess not to keep a life list: "A man who does not know how many dollars he has in the bank is either extremely wealthy or a liar."

On the cost of joining the 600 Club: "Marybelle (Mrs. Piatt) and I shall spend our declining years in some home for the indigent."

From one end of the country to the other – through 49 States – Dr. and Mrs. Piatt saw 666 species of North American birds, not far behind Joseph Taylor's record of 702. There is not a cliche or a banal phrase in the book; no tedious lists – just high adventures on the part of two sophisticated people who went after 600 birds for fun, and had fun every step of the way. –LOUIS C. FINK

The View from Hawk Mountain

Michael Harwood. Charles Scribner's Sons, New York, 1973. $6.95. 191 p. Line drawings by Fred Wetzel.

Maurice Broun, the first curator at this famous observation post in Pennsylvania, told its story in *Hawks Aloft* – and Mr. Harwood brings the report up to date. He tells how more and more people climbed Blue Mountain near Drehersville to see at close range the hundreds or thousands of Broad-winged Hawks that might pass in a day, or to spot an Osprey, or Bald Eagle, or even a Golden Eagle. Finally, the visitors taxed its capacity, and Maurice Broun wondered if Hawk Mountain had become too successful.

The author also notes how the meticulous record-keeping was distorted. Proponents of DDT cited the high counts of Ospreys at Hawk Mountain to disprove what Rachel Carson said about pesticides. But Alex Nagy (who followed Maurice Broun as curator) points out that he now has many more people counting birds, and that new observation perches on the mountain are being used. In short, there is danger in counting wild birds for a day, or a week, and believing you have a true picture of the population.

To anyone who has been to Hawk Mountain, this book is pure nostalgia. You'll remember the fairly steep climb to one of the lookouts, and then the fantastic panorama or farms and forests below you. You'll remember how hard those rocks became after you sat a few hours, and how you forgot everything when the Red-tails, or Cooper's, or Goshawks, or eagles, or (most plentiful of all) Broad-wings came in view – sometimes almost close enough to touch; frequently below you, so you could study hawks from above.

Mr. Harwood fleshes out this book with a great deal of information about birds of prey taken from standard reference books, and he has put it all together in a highly readable fashion. –LOUIS C. FINK

The Dell Encyclopedia of Birds

Bertel Bruun. Dell Publishing Co., Inc., New York, 1974. $2.45. 240 p. Illustrated in color by Paul Singer.

With 625 entries and about 400 illustrations, this pocket-sized book gives the beginning bird student easy access to a basic ornithological vocabulary. On the whole the subjects are well chosen, but I cannot understand the inclusion of pecten (a structure of unknown function within the eyeball) and the exclusion of pigeon's milk. The large number of typographical errors is distressing, and the cutlines are often inaccurate even when the text is correct (J.F. Audubon instead of J.J. Audubon, redwing instead of Red-winged Blackbird, confusion regarding use of hyphens in names of goatsuckers). The above shortcomings can be forgiven, but the confusing, incomplete, and downright inaccurate labeling of the Blue Jay accompanying the discussion of topography is absolutely inexcusable. The basic concept of the book is good, the definitions are generally neither too simple nor too technical, and often the illustrations clarify the definitions. There are enough good features in this book so the publisher should be willing to undertake major revisions (notably pages 214 and 215) before the book goes into another printing.–EFP

Birding from a Tractor Seat

Charles T. Flugum. No publisher indicated, 1973. $8.95. 435 p. Illustrations by Walter J. Breckenridge.

This is a series of monthly columns written for *The Community Magazine* of Albert Lea, Minnesota, from 1952 to 1964. Mr. Flugum ran a farm, and he writes of the hawks, plovers, larks, bluebirds and scores of other birds he watched from his tractor seat. He went on field trips with bird clubs and describes some of the good birding spots in Minnesota. As chairman of the local Audubon Wildlife Films Committee, he met some of the country's well-known naturalists. –LOUIS C. FINK

Autumn of the Eagle

George Laycock. Charles Scribner's Sons, New York, 1973. $6.95. 180 p. Photographs and maps.

Mr. Laycock, a field editor for *Audubon Magazine,* has gathered a wealth of information about the Bald Eagle.

As an indication of the contents, consider:

–Benjamin Franklin said the eagle was a coward and "often very lousy."

–An eagle's nest at Vermilion, Ohio, was 12 feet deep, 8½ feet across, and weighed 2 tons.

–After retiring from banking, Charles Broley banded 1,200 eagles.

–There are between 750 and 1,000 eagle nests in continental United States, but 4,000 breeding pairs in Alaska and 8,000 in the world.

There is a great deal of basic information about the Bald Eagle in this book, and the illustrations add interest. The proof-reading is careless: the name of the President Emeritus of the National Audubon Society is misspelled three times. –LOUIS C. FINK

Carolina Bird Club

INC.

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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from State and Federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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All CBC members not in arrears for dues receive *The Chat*, a quarterly journal devoted to bird study and conservation, and the *CBC Newsletter*, which carries information about meetings, field trips, and club projects. Articles intended for publication in *Chat* may be sent to the Editor or to the appropriate department editor listed in a recent issue of the bulletin. Items for the *Newsletter* should be sent to its Editor, F.M. Probst, P.O. Box 396, Pawley's Island, S.C. 29585. Correspondence regarding memberships, changes of address, or requests for back numbers of either publication should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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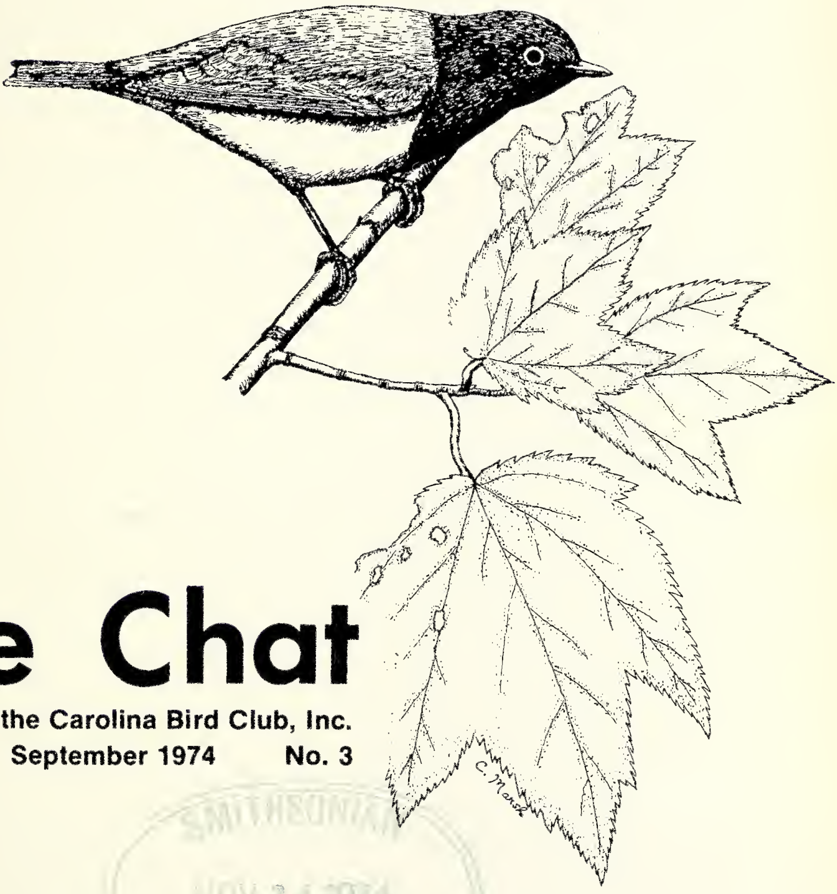

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OUR COVER—The Connecticut Warbler was drawn by Chris Marsh of Raleigh, N.C., who is a student at North Carolina State University. This species is especially appropriate for the present issue because warblers, including the rare Connecticut, were unusually abundant on the 1974 Spring Bird Count in the Carolinas.

NEW POLICIES CONCERNING THE SPRING AND CHRISTMAS BIRD COUNTS

HARRY E. LeGRAND JR. and ELOISE F. POTTER

Beginning with the 1974 Christmas Bird Count, a number of new rules and instructions will be in operation concerning the reporting of counts and their publication in *Chat*. The major reason for these changes is to improve the quality of the counts, both by insisting on full details for unusual species and by encouraging thorough coverage of the various habitats within each count circle. Also, a revised count form has been designed for use starting with the upcoming Christmas Count. It is imperative that all persons who participate on bird counts in the Carolinas read and understand these new instructions, particularly those concerning the reporting of details for unusual species. Compilers of counts should be especially aware of these instructions, as many statements pertain strictly to them. Harry LeGrand is now the editor of the Spring and Christmas Counts, but compilers still should send the completed count forms to Eloise Potter, who will continue to prepare the count table.

1. FULL DETAILS FOR UNUSUAL SPECIES: No longer will just the name of the observer(s) be acceptable to document a rare or unusual species. When anyone reports a species on a count that is rare for the area at that season, he must submit to his compiler full and convincing details for that species, so that the compiler can include these details with the count form and submit both to *Chat*. Full details are required by *American Birds* on unusual species reported on Christmas counts published in that journal, and the write-up of details now requested by *Chat* should follow exactly those required by *American Birds*. The details must convince the editor that the species was correctly identified. State briefly, in about three sentences or phrases, how the species was identified, including field marks observed, calls or songs if heard, habitat and general location of the sighting, observation conditions (light, distance, and observation time), and the observer's name and address. As an example, the following would be considered sufficient and convincing details for a rare species on the Raleigh Christmas Count:

> *Bewick's Wren*—(Harry LeGrand, 331 Yadkin Drive, Raleigh, N. C. 27609)—one seen in a brushpile near Lake Raleigh; seen in good light for 30 seconds at 50 feet; white eye stripe and underparts, long tail with white spots in the corners.

The editors will be less lenient in judging the validity of unusual records (both rare species and extremely late or early individuals), particularly those with no details reported. For a *very* rare species without details (e.g., a Least Tern in the piedmont), the editors will completely remove the record from the count without mention. For a rare species without details (e.g., a Common Tern in the piedmont on a Spring Count), the editors will remove it from the table and list it in the Compiler's Comments section of the count, in brackets, as being reported but without details. This latter procedure has been established because the editors believe such a record may well be valid, but without details the record cannot be fully accepted and included in the count table. The purpose of this insistence on reporting details is to insure that every record of a rare species appearing on the count table is valid.

The compiler should include the details for unusual species in the Compiler's Comments section of the count form. If there is not enough space on the form to complete the listing of details, the compiler should finish the report on the back of the first page of the count form or attach additional sheets of paper. Because of space limitations, the details of unusual species *cannot* be published in full in *Chat;* but a brief summary will be published, including the names of observers for noteworthy species. The Compiler's Comments section is also to be used for information on unusual abundance of species, long-term population trends, influence of weather on bird activity, or anything else the compiler believes other birders would be interested in knowing about his count.

2. PUBLICATION OF COUNTS: *Chat* can print a maximum of 29 counts on a count table, due to the limited size of the pages in the journal. Anticipating the time when 30 or more count reports might be received, the editors have adopted some new policies concerning the establishment of new counts and the publication of all counts. We encourage new, well-organized counts; however, we discourage the continuance of counts with only a handful of observers who do not get out before dawn, spend half their time in cars, and tally only half as many species as neighboring counts. These latter counts do not contribute enough to our knowledge of bird life to justify the cost of publication. Beginning with the upcoming (1974) Christmas Count, *Chat* will print a maximum of 29 counts on the table. If more than 29 counts are received, 29 will be printed on the table, but the remaining will be published in paragraph form (as in *American Birds)* in the same issue of *Chat* as the count table. Those which will be omitted from the table are ones which the editors feel are weak and contribute the least information of scientific value. Counts reporting less than the following numbers of species are considered weak and are in jeopardy of being omitted from the table: Spring Count—100 for the immediate coast, 70 for the coastal plain, 80 for the piedmont, and 60 for the mountains; Christmas Count—100 for the immediate coast, 60 for the coastal plain and most of the piedmont, and 40 for the upper piedmont and mountains. Those counts that consistently record fewer species than the figures listed should be either discontinued or upgraded in the future by increasing the number and field ability of observers and the number of hours in the field. Compilers of new counts also should be aware of the minimum figures listed above. These new policies are designed to make the counts printed on the table more nearly comparable as to the number of species and individuals, and to make possible the acceptance of new and well-organized counts in areas of the Carolinas not presently being censused.

3. BIG DAY REPORT: In order to encourage field work in areas not presently having counts, the editors will accept Big Day Reports during the Spring Count and Christmas Count periods. The Big Day must be a count made by only one party during a single day and must total at least 8 hours for a Christmas report and 10 hours for a spring report. This count has *no territory limitations,* other than that it must not cover any territory within an already existing count circle (for the same season) and that it must be completely within the Carolinas. Thus, if there is no Spring Count in the chosen area, a carload of birders from Raleigh can have a Spring Big Day beginning at Bodie Island, N.C., and ending at Hatteras Inlet, providing all observers remain within speaking distance of each other, this being our definition of a Big Day party. The compiler of a Big Day Report will submit to *Chat* a list of all species and individuals recorded on the count and full details for all unusual species, as outlined above. Also to be reported are the date and duration of the count, the territory covered, weather data, names of the participants, and hours and miles by foot and car. *Chat* cannot publish the full lists for these Big Day Reports, but it will publish some of the noteworthy records, as well as the total number of species and individuals and the basic information listed in the previous sentence. We hope the Big Day Report will become a popular activity among Carolina birders, especially the younger and more competitive ones, and that these reports will provide a wealth of distributional data from counties where there are not enough bird watchers to man a full-scale Spring or Christmas Count. Perhaps *Chat* could publish Big Day Reports made during the summer and fall seasons, as well, in the near future.

4. COUNT DATES AND COUNT PERIODS: *Chat* has never set strict, permanent dates within which Spring and Christmas counts are to be conducted. The journal has usually accepted the same dates established by *American Birds* within which Christmas counts are to be made. Christmas Count dates for *Chat* will still be those listed by *American Birds* in its April issue, and these dates will be published in *Chat* in the June or September issue. "Count period" for the Christmas Count will continue to be the complete spread of dates within which a count may be taken. The editors are hereby establishing the dates of 16 April and 15 May as the inclusive dates within which a Spring Count can be taken and published. "Count period" for bird counts will now be the 3 days before and the 3 days after a given count. Thus, for a count on 17 April, the count period will be from 14 April through 20 April, and any species

reported within that count circle on or between those dates (but not reported on count day) is to be listed on the count form with an asterisk. Likewise, a count on 15 May will have a count period of 12 May through 18 May.

5. FIELD-HOURS AND FIELD-MILES: Throughout the years *Chat* has always required compilers to list the field parties, the party-hours, and the party-miles for their count; yet *Chat* has never strictly defined the terms "party," "party-hours," and "party-miles." Compilers usually have considered a party as a group of observers who cover a specified section of the count circle, without regard as to whether the observers split into subgroups or remain together throughout the day. *Chat* now defines a "count party" as an individual or a group responsible for covering a specified section of the count circle—the group may split up into subgroups or individuals—but which must turn in to the compiler a *single list* of species and individuals. Thus, the number of parties reported by a compiler on the count form should be the number of field lists he received.

Chat is abolishing the term "party-hour" and originating the more meaningful term "field-hour." Field-hours are the time (in hours) that an individual, a subparty, or a party is counting birds in the field separate from all other such groups. If all members of a subparty or party remain within speaking distance of each other while counting birds for 10 hours, then the group totaled 10 field-hours. However, if a two-man group spent 4 hours birding together (within speaking distance) and 6 hours birding separately, they totaled 4 + 6 + 6 = 16 field-hours. One large party can have over 40 field-hours, perhaps by having four separate individuals working 11 hours each or by having three two-man subparties each totaling 15 field-hours. The concept of field-hours is designed to indicate the total time that observers spent counting birds within the count circle, which the usage of party-hours does not do. *Chat* will not require compilers and observers to break down field-hours into foot-hours or car-hours.

As an example of the field-hour calculations, the following hypothetical case should be beneficial. A five-man party is covering the Carolina Beach section of the Wilmington Christmas Count. One member birds by himself for 10 hours (10 field-hours), one two-man subparty birds for 10 hours but only 2 hours together (18 field-hours), and the other two-man subparty birds for 12 hours but only 6 hours together (18 field-hours). At the compilation of the count, they combine their three separate lists into one list (one count party), and they total 46 field-hours. The five observers instead may wish to report three separate lists of birds (thus becoming three parties), but their grand total of 46 field-hours does not change (10 by party I, 18 by party II, and 18 by party III).

"Party-miles" now become "field-miles," and both foot and car miles are to be calculated. Field-miles by foot should be calculated exactly as are the field-hours. If two observers spent the whole day on foot and birded together for 2 miles and each walked 5 miles when separated, they totaled 12 field-miles by foot. Car miles should be the total mileage of all cars used by observers on count day within the count circle during daylight hours. Car mileage at night is not to be counted, because birds seldom are seen while driving at night, whereas large numbers and many species of birds can be identified during daylight driving. Mileage from other vehicles should be included with the car miles, as long as birds can be counted from the vehicle.

The editors request that all Spring Count forms and Spring Big Day Reports be returned to Eloise Potter by 1 June, and that all Christmas Count forms and Big Day Reports for that season be returned by 15 January. Because the compiling and editing of the count tables and the writing of summary paragraphs about the counts are time-consuming procedures, we must insist that all compilers comply with the above deadlines. Late reports will be accepted only at the convenience of the editors.

SPRING BIRD COUNT 1974		COAST			COASTAL PLAIN					PIEDMONT													MTN.		
	Total Individuals	Morehead City, N.C. 27 April	Wilmington, N.C. 27 April	Charleston, S.C. 27 April	Beaufort Co., N.C. 5 May	Pamlico Co., N.C. 28 April	Dillon, S.C. 1 May	Southern Pines, N.C. 28 April	Roanoke Rapids, N.C. 4 May	Henderson, N.C. 4 May	Raleigh, N.C. 27 April	Durham, N.C. 28 April	Chapel Hill, N.C. 5 May	Greensboro, N.C. 4 May	Winston-Salem, N.C. 4 May	Iredell Co., N.C. 11 May	Stanly Co., N.C. 27 April	Charlotte, N.C. 4 May	Greenville, S.C. 4 May	Clemson, S.C. 4 May	Elkin-Ronda, N.C. 5 May	Caldwell Co., N.C. 25 April	Yancey-McDowell Co., N.C. 27 April	Buncombe Co., N.C. 4 May	Brevard, N.C. 18 May
Common Loon	56	23	14	3	-----	-----	-----	1	8	-----	1	-----	-----	2	*	-----	1	-----	-----	1	-----	-----	-----	2	-----
Red-throated Loon	3	2	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Horned Grebe	4	-----	2	-----	-----	-----	-----	2	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pied-billed Grebe	25	1	5	2	-----	5	-----	6	2	-----	1	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----
Brown Pelican	236	3	1	232	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Gannet	25	25	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Double-cr. Cormorant	524	72	310	127	10	2	*	3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----
Anhinga	37	-----	25	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Great Blue Heron	136	18	54	34	1	-----	-----	1	6	-----	11	1	-----	1	3	*	1	1	-----	3	-----	1	-----	*	-----
Green Heron	214	7	42	45	2	5	2	7	5	-----	16	10	8	17	6	2	8	2	1	16	1	1	2	7	2
Little Blue Heron	98	31	33	31	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	1	-----	-----	-----	-----	1	-----	-----	-----	-----	-----
Cattle Egret	234	128	20	20	-----	52	-----	3	1	-----	4	-----	-----	-----	1	5	-----	-----	-----	*	-----	-----	*	-----	-----
Great Egret	323	179	42	100	2	-----	-----	-----	*	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Snowy Egret	382	90	123	167	-----	1	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Louisiana Heron	139	54	16	69	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Black-cr. Night Heron	22	4	10	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Yellow-cr. Night Heron	11	3	2	4	-----	-----	-----	-----	-----	-----	*	-----	-----	1	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----
Least Bittern	17	6	4	4	-----	-----	-----	1	1	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
American Bittern	5	-----	-----	2	-----	-----	-----	-----	1	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----
Glossy Ibis	169	133	14	22	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
White Ibis	179	33	30	116	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Canada Goose	96	-----	9	-----	8	4	-----	-----	9	-----	2	-----	-----	-----	53	*	-----	11	-----	-----	-----	-----	-----	-----	-----
Snow Goose	1	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Fulvous Tree Duck	7	-----	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Mallard	220	4	3	1	9	-----	1	2	14	-----	6	-----	1	60	39	15	5	5	1	4	-----	-----	10	13	27
Black Duck	18	9	-----	-----	-----	1	-----	-----	3	-----	-----	-----	-----	2	-----	-----	3	-----	-----	-----	-----	-----	-----	-----	-----
Pintail	3	-----	3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Green-winged Teal	2	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Blue-winged Teal	67	10	10	22	-----	-----	-----	2	12	-----	2	*	-----	-----	1	-----	-----	-----	-----	4	-----	-----	-----	4	-----
American Wigeon	4	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Wood Duck	344	2	23	45	9	21	9	9	102	-----	39	9	8	3	6	-----	11	25	-----	20	-----	-----	*	1	2
Ring-necked Duck	9	-----	1	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	3	-----	-----	-----	-----	-----	4	-----	-----
Lesser Scaup	5	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	4	-----	-----
Scaup (sp. ?)	1	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Common Goldeneye	*	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Bufflehead	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----
White-winged Scoter	35	35	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Surf Scoter	15	15	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Black Scoter	100	100	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Ruddy Duck	2	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Hooded Merganser	11	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	9	-----	-----

Common Merganser	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Red-breasted Merganser	108	44	36	3	-----	-----	-----	2	*	-----	-----	-----	-----	9	-----	-----	7	-----	-----	3	-----	-----	-----	4	-----
Turkey Vulture	185	5	7	48	-----	-----	-----	1	20	1	3	22	1	3	14	10	27	3	1	-----	-----	-----	6	5	8
Black Vulture	50	*	1	12	-----	-----	-----	-----	17	2	4	4	*	2	*	3	4	-----	-----	*	-----	1	-----	-----	-----
Sharp-shinned Hawk	6	1	1	-----	-----	-----	-----	-----	-----	-----	2	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----
Cooper's Hawk	15	-----	-----	8	-----	-----	-----	1	-----	-----	2	*	-----	1	*	-----	1	-----	-----	-----	-----	-----	1	1	-----
Red-tailed Hawk	122	3	4	16	-----	1	1	1	12	3	25	7	2	4	5	4	8	2	-----	8	2	-----	5	5	4
Red-shouldered Hawk	47	7	3	10	-----	-----	-----	2	5	2	4	5	2	-----	1	1	2	2	-----	-----	-----	-----	1	-----	-----
Broad-winged Hawk	23	-----	-----	-----	-----	-----	*	*	-----	-----	2	2	-----	-----	*	2	3	-----	-----	2	-----	-----	5	2	5
Bald Eagle	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Marsh Hawk	5	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	2	-----	-----	-----	-----	-----	-----	-----	-----	1
Osprey	126	12	59	10	1	10	*	1	4	2	4	-----	-----	6	*	1	11	-----	-----	3	-----	1	*	1	-----
Peregrine Falcon	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----
American Kestrel	11	-----	3	-----	-----	1	-----	-----	-----	1	-----	-----	-----	-----	-----	*	1	-----	-----	-----	-----	1	2	2	*
Ruffed Grouse	10	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	9	-----
Bobwhite	1317	81	82	54	30	25	31	13	64	28	146	113	46	144	101	15	189	28	5	30	5	17	11	26	33
Turkey	2	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----
King Rail	9	9	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Clapper Rail	111	68	20	23	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Virginia Rail	9	1	7	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sora	22	4	10	6	-----	-----	-----	-----	1	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----
Purple Gallinule	9	2	7	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Common Gallinule	53	-----	18	33	-----	1	-----	-----	-----	-----	*	-----	1	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
American Coot	198	-----	41	121	12	-----	1	-----	1	-----	6	1	-----	-----	3	-----	5	-----	-----	*	-----	5	2	-----	-----
American Oystercatcher	234	87	69	78	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Semipalmated Plover	491	140	236	112	-----	-----	-----	1	*	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----
Piping Plover	48	30	18	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Wilson's Plover	119	32	87	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Killdeer	246	4	7	4	9	-----	-----	13	5	5	9	22	3	30	38	23	42	11	6	9	-----	-----	2	3	1
Black-bellied Plover	313	83	159	69	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Ruddy Turnstone	81	40	38	3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
American Woodcock	23	1	-----	-----	-----	-----	-----	-----	3	-----	5	1	3	1	6	-----	2	-----	-----	1	-----	-----	-----	-----	-----
Common Snipe	52	3	1	5	-----	-----	-----	5	9	-----	4	2	*	1	3	-----	5	-----	-----	9	-----	-----	-----	5	-----
Whimbrel	199	66	40	93	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Upland Sandpiper	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Spotted Sandpiper	147	1	4	14	-----	-----	3	14	30	2	3	4	7	9	8	1	6	5	5	11	3	-----	2	4	11
Solitary Sandpiper	146	*	4	1	3	-----	2	3	25	4	17	2	5	5	48	1	2	5	-----	11	1	1	2	4	-----
Willet	542	247	188	106	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Greater Yellowlegs	120	24	26	22	1	2	-----	6	24	-----	3	-----	-----	-----	8	-----	-----	-----	-----	1	-----	-----	3	-----	-----
Lesser Yellowlegs	206	92	12	14	1	-----	-----	7	58	-----	*	2	-----	3	7	-----	-----	-----	-----	6	5	-----	-----	-----	-----
Red Knot	51	11	-----	40	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Purple Sandpiper	1	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Pectoral Sandpiper	49	6	-----	-----	-----	-----	-----	-----	32	-----	3	-----	-----	-----	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
White-rumped Sandpiper	*	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Least Sandpiper	230	71	9	10	-----	-----	1	25	67	-----	10	*	1	-----	23	3	-----	3	-----	7	-----	-----	-----	-----	-----
Dunlin	1193	390	753	46	-----	-----	-----	-----	3	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Short-billed Dowitcher	1241	400	841	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dowitcher (sp. ?)	137	-----	-----	137	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Semipalmated Sandpiper	105	44	40	20	-----	-----	-----	-----	*	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Western Sandpiper	58	17	21	20	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Marbled Godwit	8	*	7	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sanderling	186	90	84	12	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Black-necked Stilt	13	2	-----	11	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Great Black-backed Gull	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

SPRING BIRD COUNT 1974		COAST			COASTAL PLAIN					PIEDMONT													MTN.		
	Total Individuals	Morehead City, N.C. 27 April	Wilmington, N.C. 27 April	Charleston, S.C. 27 April	Beaufort Co., N.C. 5 May	Pamlico Co., N.C. 28 April	Dillon, S.C. 1 May	Southern Pines, N.C. 28 April	Roanoke Rapids, N.C. 4 May	Henderson, N.C. 4 May	Raleigh, N.C. 27 April	Durham, N.C. 28 April	Chapel Hill, N.C. 5 May	Greensboro, N.C. 4 May	Winston-Salem, N.C. 4 May	Iredell Co., N.C. 11 May	Stanly Co., N.C. 27 April	Charlotte, N.C. 4 May	Greenville, S.C. 4 May	Clemson, S.C. 4 May	Elkin-Ronda, N.C. 5 May	Caldwell Co., N.C. 25 April	Yancey-McDowell Co., N.C. 27 April	Buncombe Co., N.C. 4 May	Brevard, N.C. 18 May
Herring Gull	94	20	19	14	7	1	-----	2	4	-----	1	-----	-----	-----	-----	-----	25	-----	-----	1	-----	-----	-----	-----	-----
Ring-billed Gull	966	17	171	79	28	41	-----	33	346	39	6	*	-----	66	*	-----	125	-----	-----	15	-----	-----	-----	-----	-----
Laughing Gull	1052	294	167	337	27	227	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----
Bonaparte's Gull	7	1	1	1	-----	-----	-----	-----	1	-----	3	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----
Gull-billed Tern	72	28	39	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Forster's Tern	41	10	31	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----
Common Tern	132	88	16	26	-----	-----	-----	*	-----	-----	*	-----	-----	2	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Least Tern	464	151	278	27	4	4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Royal Tern	941	250	457	203	15	16	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Sandwich Tern	39	37	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Caspian Tern	13	2	7	-----	-----	-----	-----	1	*	-----	2	-----	-----	1	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----
Black Skimmer	1812	1509	196	107	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Ringed Turtle Dove	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Rock Dove	975	38	149	-----	44	14	14	4	44	27	67	121	10	149	156	27	37	6	1	9	8	25	4	16	5
Mourning Dove	3520	53	130	70	33	25	102	93	215	58	498	168	74	373	882	61	106	101	3	95	15	117	6	123	119
Ground Dove	11	4	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Yellow-billed Cuckoo	40	2	2	2	-----	2	-----	-----	5	-----	1	1	1	1	4	10	1	2	-----	1	-----	1	1	2	1
Black-billed Cuckoo	4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	2	-----	2	-----	-----	-----	*	-----	-----	-----	-----	-----
Barn Owl	5	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	3	*	-----	-----	-----	-----	-----	2	-----	-----	-----
Screech Owl	29	2	2	1	-----	1	-----	1	3	-----	1	-----	-----	-----	6	-----	1	2	-----	1	-----	2	1	3	2
Great Horned Owl	19	1	-----	2	-----	-----	-----	-----	2	-----	4	2	*	-----	1	-----	4	1	-----	-----	-----	-----	-----	2	*
Barred Owl	71	1	5	16	-----	-----	-----	2	27	-----	5	3	3	1	-----	3	1	2	-----	1	1	-----	*	-----	-----
Saw-whet Owl	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	1	-----	-----
Chuck-will's-widow	93	12	19	7	-----	7	*	5	17	-----	6	1	-----	-----	-----	1	3	-----	-----	15	-----	-----	-----	-----	-----
Whip-poor-will	154	-----	2	-----	-----	-----	-----	10	10	5	25	14	12	2	9	4	14	-----	-----	11	-----	5	1	17	13
Common Nighthawk	80	1	32	1	3	1	2	2	1	3	2	3	*	4	4	10	-----	6	-----	*	-----	-----	4	-----	1
Chimney Swift	1618	15	34	103	31	5	9	27	78	28	116	70	6	130	270	134	119	64	9	45	-----	8	12	49	256
Ruby-th. Hummingbird	158	4	3	25	1	-----	-----	5	11	5	8	7	7	1	14	3	6	7	1	5	-----	2	3	14	26
Belted Kingfisher	127	7	8	6	-----	-----	1	7	5	4	11	8	6	9	8	4	9	1	-----	4	1	3	7	11	7
Common Flicker	671	20	79	5	15	13	6	7	9	19	65	27	5	92	84	11	55	22	8	15	8	24	10	46	26
Pileated Woodpecker	181	6	13	55	1	5	4	2	20	-----	2	-----	3	7	3	5	7	-----	1	6	-----	3	6	17	15
Red-bellied Woodpecker	848	16	43	116	9	6	10	18	44	24	141	71	40	104	82	11	34	25	3	17	5	16	4	5	4
Red-headed Woodpecker	148	10	17	12	16	3	2	5	3	6	13	4	1	14	3	1	20	4	4	5	-----	-----	-----	2	3
Yellow-bellied Sapsucker	31	1	-----	1	-----	-----	-----	-----	-----	-----	1	-----	-----	2	1	1	12	2	-----	-----	2	1	1	3	3
Hairy Woodpecker	88	1	3	9	1	-----	-----	2	3	1	16	5	4	8	7	6	2	-----	2	2	-----	3	3	-----	10
Downy Woodpecker	311	8	6	15	6	2	1	7	16	2	48	18	18	29	31	10	13	7	1	11	5	7	6	25	19
Red-cockaded Woodpecker	14	2	1	6	2	-----	-----	2	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Eastern Kingbird	567	38	34	23	13	14	26	14	172	14	28	34	15	26	30	20	8	24	2	20	1	-----	3	7	1
Scissor-tailed Flycatcher	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----
Great Crested Flycatcher	671	55	56	190	14	14	8	16	45	10	42	8	5	55	24	26	13	16	3	17	4	-----	10	26	14
Eastern Phoebe	266	-----	-----	3	-----	-----	-----	6	3	11	26	22	17	38	18	14	19	4	3	11	-----	5	9	18	39

Yellow-bellied Flycatcher	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----
Acadian Flycatcher	219	9	8	20	2	1	2	7	31	-----	14	12	22	3	18	19	3	14	-----	11	-----	-----	4	7	12
Willow Flycatcher	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----
Least Flycatcher	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	1	2	3	-----	2	-----	-----	1	-----	-----	5	1	1
Eastern Wood Pewee	186	2	3	36	-----	3	-----	3	8	6	3	2	15	17	15	17	4	2	2	7	-----	2	2	5	32
Olive-sided Flycatcher	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----
Horned lark	15	-----	-----	-----	-----	-----	-----	2	1	-----	1	-----	-----	2	4	5	-----	-----	-----	-----	-----	-----	-----	-----	-----
Tree Swallow	1883	-----	467	420	770	6	-----	21	47	-----	108	3	3	13	8	3	6	-----	-----	2	-----	-----	1	5	-----
Bank Swallow	101	-----	23	-----	10	-----	-----	*	2	16	2	-----	-----	3	1	-----	10	-----	-----	2	-----	5	-----	-----	27
Rough-winged Swallow	364	7	43	9	-----	2	11	13	8	-----	35	12	37	19	32	3	26	2	1	20	5	6	10	23	40
Barn Swallow	1896	53	103	113	235	35	2	22	97	9	121	29	51	273	178	137	103	19	12	91	2	20	28	70	93
Cliff Swallow	79	-----	-----	-----	-----	-----	-----	*	1	-----	*	-----	-----	-----	-----	-----	68	10	-----	*	-----	-----	-----	-----	-----
Purple Martin	1136	27	65	23	358	73	*	7	1	2	42	85	-----	28	112	25	210	-----	5	9	43	16	*	5	-----
Blue Jay	3145	67	141	331	47	11	57	69	64	85	294	209	63	392	186	84	269	131	21	85	22	78	87	198	154
Common Raven	17	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	9	4	4
Common Crow	1147	76	32	41	8	-----	20	17	46	22	136	48	63	123	84	26	123	33	10	18	22	8	18	92	81
Fish Crow	280	19	90	90	16	4	-----	29	14	-----	16	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Carolina Chickadee	1331	23	50	128	18	10	7	29	35	31	138	66	63	116	78	44	137	59	11	21	3	36	28	99	101
Tufted Titmouse	1377	12	72	202	24	26	9	19	26	12	166	89	46	80	69	18	72	34	8	27	7	49	26	158	126
White-breasted Nuthatch	167	-----	-----	2	2	-----	*	1	1	-----	6	5	9	12	22	1	16	-----	-----	4	1	13	2	31	39
Red-breasted Nuthatch	18	-----	-----	-----	-----	-----	-----	2	-----	-----	1	-----	-----	-----	1	-----	-----	-----	-----	*	-----	-----	14	-----	-----
Brown-headed Nuthatch	359	5	33	66	3	3	10	12	3	31	25	26	22	50	19	4	6	17	2	17	3	2	-----	-----	-----
Brown Creeper	5	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	2	*	-----
House Wren	230	2	4	-----	-----	-----	-----	-----	8	12	21	32	4	32	16	8	20	9	2	2	5	12	7	31	3
Winter Wren	19	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	15	4	-----
Bewick's Wren	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----
Carolina Wren	1559	46	92	173	21	7	7	22	63	23	224	131	92	174	88	28	104	32	7	34	12	30	4	82	63
Long-billed Marsh Wren	41	4	3	25	-----	3	-----	2	*	-----	*	-----	-----	-----	-----	-----	1	-----	-----	3	-----	-----	-----	-----	-----
Short-billed Marsh Wren	7	1	2	1	-----	-----	-----	-----	-----	-----	1	1	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----
Mockingbird	2067	48	182	53	12	19	71	27	75	64	202	178	44	358	218	61	213	90	16	37	6	30	3	42	18
Catbird	852	17	30	6	16	1	10	33	76	21	56	46	56	115	91	19	32	42	6	22	8	10	14	84	41
Brown Thrasher	886	15	58	28	36	5	21	22	29	37	83	58	43	92	37	23	112	29	13	32	6	20	3	44	40
American Robin	3059	-----	32	-----	93	21	106	50	39	179	322	131	76	532	303	106	400	150	38	47	11	53	43	162	165
Wood Thrush	1150	3	14	14	14	4	14	23	107	30	175	116	79	180	76	28	40	31	11	41	6	9	10	93	32
Hermit Thrush	6	1	-----	2	-----	-----	-----	*	-----	-----	1	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	2	-----
Swainson's Thrush	127	*	1	-----	-----	-----	-----	-----	2	-----	2	2	1	41	42	8	-----	2	-----	13	2	-----	*	11	-----
Gray-cheeked Thrush	11	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	4	3	-----	1	-----	1	-----	-----	1	-----	-----
Veery	73	-----	1	-----	-----	-----	-----	1	29	2	2	2	4	3	18	2	-----	2	-----	*	-----	-----	3	4	-----
Eastern Bluebird	553	2	2	12	12	4	-----	13	42	14	25	20	19	32	24	41	155	17	7	36	1	14	4	26	31
Blue-gray Gnatcatcher	838	34	39	166	2	7	4	30	58	3	157	114	41	21	54	17	5	12	-----	18	-----	1	33	21	1
Golden-crowned Kinglet	60	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	47	11	-----
Ruby-crowned Kinglet	189	1	1	19	-----	-----	-----	6	7	-----	69	7	*	9	21	-----	7	1	-----	2	-----	25	3	11	-----
Water Pipit	36	-----	-----	-----	-----	-----	2	1	-----	-----	9	*	*	-----	20	-----	-----	-----	-----	3	-----	-----	-----	1	-----
Cedar Waxwing	726	59	45	-----	-----	-----	-----	2	*	17	99	51	28	105	87	20	31	79	2	26	-----	-----	17	18	40
Loggerhead Shrike	99	-----	3	2	-----	-----	*	10	1	4	20	3	-----	12	5	8	17	9	-----	4	-----	-----	-----	1	-----
Starling	5510	125	352	26	160	145	122	80	118	144	621	114	97	1474	400	162	446	289	50	108	30	68	22	254	103
White-eyed Vireo	587	54	32	208	6	19	2	29	34	2	35	36	25	6	10	*	4	4	1	24	1	3	20	25	7
Yellow-throated Vireo	169	8	6	9	2	7	-----	13	4	5	36	20	12	13	6	2	-----	4	1	2	1	-----	12	6	-----
Solitary Vireo	78	-----	-----	3	-----	-----	-----	1	-----	2	3	1	1	1	5	7	2	-----	-----	1	-----	-----	27	19	5
Red-eyed Vireo	1129	27	20	85	2	5	2	37	130	7	231	123	70	78	42	29	28	23	1	64	1	3	14	66	40
Philadelphia Vireo	3	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	*	-----	-----	-----	-----	-----	-----	-----	1	1	-----
Warbling Vireo	7	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	4	2	-----	-----	-----	-----	-----	-----	-----	1	*
Black-and-white Warbler	364	3	3	1	2	-----	-----	17	56	-----	63	51	16	5	10	12	12	7	1	7	-----	2	35	46	15
Prothonotary Warbler	295	36	39	68	-----	-----	6	20	42	-----	29	13	13	3	10	-----	5	5	-----	5	-----	-----	1	-----	-----

SPRING BIRD COUNT 1974		COAST			COASTAL PLAIN					PIEDMONT													MTN.		
	Total Individuals	Morehead City, N.C. 27 April	Wilmington, N.C. 27 April	Charleston, S.C. 27 April	Beaufort Co., N.C. 5 May	Pamlico Co., N.C. 28 April	Dillon, S.C. 1 May	Southern Pines, N.C. 28 April	Roanoke Rapids, N.C. 4 May	Henderson, N.C. 4 May	Raleigh, N.C. 27 April	Durham, N.C. 28 April	Chapel Hill, N.C. 5 May	Greensboro, N.C. 4 May	Winston-Salem, N.C. 4 May	Iredell Co., N.C. 11 May	Stanly Co., N.C. 27 April	Charlotte, N.C. 4 May	Greenville, S.C. 4 May	Clemson, S.C. 4 May	Elkin-Ronda, N.C. 5 May	Caldwell Co., N.C. 25 April	Yancey-McDowell Co., N.C. 27 April	Buncombe Co., N.C. 4 May	Brevard, N.C. 18 May
Swainson's Warbler	17	3	3	1	-----	-----	-----	4	5	-----	1	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Worm-eating Warbler	30	-----	-----	1	-----	-----	-----	-----	2	-----	3	1	*	5	3	1	1	-----	-----	1	-----	-----	6	6	-----
Golden-winged Warbler	18	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	16	-----
Blue-winged Warbler	22	-----	-----	-----	-----	-----	-----	1	5	-----	*	8	3	1	*	*	-----	-----	-----	-----	-----	-----	-----	4	-----
Lawrence's W. (hybrid)	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----
Tennessee Warbler	14	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	1	-----	1	1	-----	-----	-----	*	-----	-----	4	7	-----
Orange-crowned Warbler	2	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----
Nashville Warbler	4	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	1	-----	-----	-----	1	-----
Northern Parula	811	28	159	293	7	9	5	23	30	1	95	36	14	14	13	20	4	8	-----	5	-----	-----	23	9	15
Yellow Warbler	224	-----	6	3	-----	-----	1	3	32	1	13	12	7	6	12	11	4	6	6	29	-----	3	16	52	1
Magnolia Warbler	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	1	1	3	2	4	-----	-----	11	-----	-----	2	3	1
Cape May Warbler	151	1	-----	-----	-----	-----	-----	-----	1	-----	2	*	*	7	56	15	3	8	2	37	-----	1	3	15	*
Black-th. Blue Warbler	153	-----	1	-----	-----	-----	-----	7	28	-----	8	4	12	2	12	8	2	5	1	2	-----	-----	21	33	7
Yellow-rumped Warbler	1813	61	112	27	17	35	17	59	31	20	430	223	103	125	128	49	87	40	3	80	3	12	27	124	*
Black-th. Green Warbler	103	15	-----	50	-----	-----	-----	-----	1	-----	3	-----	1	3	3	1	-----	-----	1	1	-----	-----	20	4	-----
Cerulean Warbler	31	-----	-----	-----	-----	-----	-----	-----	29	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	1	-----
Blackburnian Warbler	39	-----	-----	1	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	4	1	-----	-----	-----	14	-----	1	9	1	7
Yellow-throated Warbler	455	24	95	234	2	7	2	9	6	-----	35	14	11	-----	2	2	1	-----	-----	1	-----	1	8	1	-----
Chestnut-sided Warbler	90	-----	-----	-----	-----	-----	-----	1	-----	-----	1	2	*	3	4	2	-----	-----	2	12	-----	1	19	40	3
Bay-breasted Warbler	42	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	2	2	7	-----	-----	-----	19	-----	-----	1	11	*
Blackpoll Warbler	96	*	-----	2	-----	-----	-----	*	2	1	*	-----	4	4	11	33	-----	9	-----	17	-----	-----	3	10	*
Pine Warbler	584	9	47	239	2	7	2	16	9	15	97	40	21	21	24	2	7	2	-----	13	-----	-----	3	8	-----
Prairie Warbler	352	88	31	64	2	15	-----	8	12	3	20	44	14	5	2	11	9	6	-----	8	-----	-----	*	10	*
Palm Warbler	87	6	-----	1	-----	-----	-----	3	*	-----	21	2	2	1	-----	1	-----	2	1	10	-----	-----	1	36	-----
Ovenbird	267	*	-----	1	4	5	-----	7	5	1	62	21	13	11	18	5	-----	1	1	5	-----	-----	32	56	19
Northern Waterthrush	37	*	-----	1	-----	-----	-----	1	1	-----	9	1	15	3	1	-----	-----	-----	-----	2	-----	-----	2	1	*
Louisiana Waterthrush	85	2	1	-----	-----	2	-----	4	5	-----	26	15	5	2	1	1	1	1	-----	1	-----	-----	10	8	*
Kentucky Warbler	79	1	1	4	-----	-----	-----	5	12	-----	19	3	8	2	6	2	-----	-----	-----	4	-----	-----	3	6	3
Connecticut Warbler	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	1	*	-----
Common Yellowthroat	737	55	26	53	5	9	2	27	71	1	138	54	102	59	22	16	10	8	1	40	2	3	12	17	4
Yellow-breasted Chat	257	2	4	14	7	3	2	5	18	6	6	39	26	11	23	9	2	11	2	27	-----	4	1	17	18
Hooded Warbler	326	10	8	71	1	10	*	10	8	-----	69	27	10	8	6	8	11	5	-----	6	-----	-----	18	35	5
Wilson's Warbler	5	-----	-----	-----	-----	-----	-----	-----	1	-----	*	1	1	1	*	1	-----	-----	-----	-----	-----	-----	-----	-----	-----
Canada Warbler	16	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	*	-----	1	2	2	-----	1	-----	2	-----	-----	2	5	-----
American Redstart	333	3	2	2	-----	-----	-----	13	148	1	20	19	64	8	12	16	8	5	-----	6	-----	-----	3	3	*
House Sparrow	3099	59	204	21	96	177	207	83	57	31	283	113	56	364	216	136	589	132	15	33	31	67	14	71	44
Bobolink	697	-----	1	3	85	-----	40	-----	4	-----	142	-----	5	110	12	10	60	-----	-----	70	-----	-----	-----	155	-----
Eastern Meadowlark	1763	97	13	29	18	75	3	24	84	35	150	152	56	233	171	97	217	84	25	65	13	10	21	63	28
Red-winged Blackbird	3669	230	677	356	89	267	143	43	175	19	208	146	49	328	240	54	250	86	11	94	5	15	27	114	43
Orchard Oriole	344	16	63	26	8	20	9	17	47	1	39	14	3	26	5	3	2	8	1	32	-----	2	-----	2	-----
Northern Oriole	104	7	2	-----	-----	-----	-----	2	-----	3	10	2	2	15	20	4	8	2	1	7	-----	-----	1	17	1

Rusty Blackbird	55	-----	7	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	20	16	4	4	3	-----	-----	-----	-----	-----	-----	-----
Brewer's Blackbird	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----
Boat-tailed Grackle	741	154	335	252	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Common Grackle	5767	227	176	150	231	188	139	115	219	265	669	312	133	1110	320	182	377	270	52	65	48	102	52	195	170
Brown-headed Cowbird	1049	88	47	10	27	39	36	27	81	26	181	47	33	26	105	46	50	18	7	17	-----	22	22	56	38
Scarlet Tanager	259	-----	-----	-----	-----	-----	-----	2	18	-----	28	20	12	24	26	19	6	10	2	33	2	1	4	37	15
Summer Tanager	440	5	25	110	9	7	8	7	39	8	70	23	10	21	18	18	20	9	3	19	2	1	-----	-----	8
Cardinal	3906	80	200	270	76	29	84	64	156	48	495	255	237	454	300	88	421	132	13	40	24	87	55	150	148
Rose-breasted Grosbeak	195	*	-----	2	-----	-----	-----	1	12	-----	2	*	2	42	14	5	-----	9	1	28	-----	3	1	67	6
Blue Grosbeak	217	4	3	9	7	1	15	4	17	2	8	9	9	19	12	13	21	14	15	32	-----	-----	-----	3	-----
Indigo Bunting	744	9	38	9	11	3	5	5	62	3	21	20	82	92	41	51	11	59	11	46	5	3	3	81	73
Painted Bunting	94	4	21	69	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dickcissel	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Evening Grosbeak	284	-----	-----	-----	-----	-----	-----	3	-----	-----	70	*	-----	-----	2	1	103	-----	-----	-----	-----	86	*	18	1
Purple Finch	89	1	-----	-----	-----	-----	-----	-----	-----	-----	7	-----	*	10	10	-----	7	-----	-----	-----	-----	19	*	34	1
House Finch	*	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Common Redpoll	*	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	*	-----
Pine Siskin	1067	5	-----	-----	6	-----	54	31	2	7	183	60	66	60	185	*	210	66	1	4	6	73	-----	32	16
American Goldfinch	2228	7	19	42	-----	-----	*	24	54	25	155	206	268	419	230	124	130	38	15	47	1	33	27	300	64
Red Crossbill	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----	-----	-----	-----	-----	-----	-----	-----	*	-----	-----	-----	-----	-----
Rufous-sided Towhee	2012	36	92	170	28	44	21	21	48	39	329	131	70	200	161	41	140	89	13	21	14	45	22	132	105
Savannah Sparrow	552	32	105	13	-----	28	3	75	82	-----	61	34	2	16	6	-----	7	17	-----	22	-----	-----	1	48	-----
Grasshopper Sparrow	101	-----	-----	-----	-----	-----	-----	-----	1	-----	8	1	1	29	6	3	-----	2	-----	19	-----	-----	3	27	1
Sharp-tailed Sparrow	35	19	15	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Seaside Sparrow	177	52	121	4	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Vesper Sparrow	26	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	6	19	-----
Bachman's Sparrow	1	-----	1	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
Dark-eyed Junco	191	-----	-----	-----	-----	-----	-----	-----	-----	-----	3	-----	-----	-----	*	-----	11	-----	-----	-----	-----	-----	112	61	4
Tree Sparrow	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	2	-----
Chipping Sparrow	734	13	5	4	5	4	9	11	64	20	94	99	18	65	86	14	121	13	8	8	-----	-----	24	27	22
Field Sparrow	738	2	8	-----	-----	2	2	11	48	7	85	52	35	114	142	4	39	40	11	39	-----	6	12	49	30
White-crowned Sparrow	43	-----	-----	-----	-----	5	-----	-----	-----	2	6	2	4	1	-----	-----	6	-----	-----	6	-----	3	-----	8	-----
White-throated Sparrow	1982	43	60	167	8	7	29	85	143	14	346	183	182	149	102	3	204	75	6	29	8	71	11	53	4
Fox Sparrow	8	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	7	1
Lincoln's Sparrow	2	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	1	-----	-----	-----	1	-----
Swamp Sparrow	127	6	11	28	-----	-----	-----	3	11	-----	19	7	14	-----	1	-----	-----	1	-----	25	-----	-----	-----	1	-----
Song Sparrow	650	4	4	1	-----	-----	-----	-----	-----	-----	20	8	-----	81	28	18	5	28	16	18	2	23	126	152	116
Total No. Species	†256	166	172	165	83	82	66	127	136	81	155	118	109	129	143	119	123	102	72	136	53	77	124	†140	90
Total No. Individuals	104781	8106	10618	8894	2992	1946	1564	1959	4823	1691	9850	5101	3220	10174	7300	2591	6846	2881	536	2486	431	1465	1539	4774	2994
Field Observers	361	11	25	26	7	4	3	8	9	8	34	29	21	30	47	8	19	13	7	2	4	9	7	11	19
Yard Observers	154	10	2	0	0	0	2	6	1	2	13	0	0	3	4	2	51	1	1	0	3	14	0	13	26
Field Parties	145	6	10	6	3	1	2	4	5	1	14	10	12	10	15	3	8	6	3	2	2	4	3	7	8
Party-hours	1291.5	61	120	51	25	13	18	34	46	8	88	62	50	115	105	34	141	40	11	27	21	92	18	71.5	40
Party-miles	4188.5	122	640	195	125	78	68	143	40	18	60	212.5	85	442	490	150	250	98	75	210	35	55	147	230	220

*Seen in count area during count period but not on count day.
†Plus one hybrid warbler.

SPRING BIRD COUNT—1974

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The success of an individual bird count or the count for the Carolinas as a whole should not be judged solely by the number of species recorded. Too often the species total is regarded as the only criterion of success. Even though the 1974 Spring Bird Count's 256 species were one less than the 1973 total and 10 fewer than the all-time high of 266 species in 1972, many of these 256 species were recorded in all-time high numbers. For example, of the 36 species of warblers reported this spring, 27 were more numerous (total individuals) than in both the 2 previous years. Since the numbers of observers and field-hours have remained rather constant over the last 3 years, the increase in numbers of most species probably was due to the beautiful and mild weather on most counts and to the observers' increasing familiarity with the good birding spots in their count circles. The increases might represent actual increases in the populations of birds, though this seems unlikely for most species.

The three coastal counts had excellent results, with Wilmington leading all counts with 172 species. Morehead City (166) and Charleston (165) were not far behind. Raleigh led all inland counts in species with 155, but Winston-Salem (143), Buncombe County (140), Roanoke Rapids (136), and Clemson (136) also did exceptionally well. Only the three counts held on 5 May were plagued with bad weather, an all-day rain. Otherwise, most of the counts enjoyed clear, mild, and rather windless weather. The Clemson and Durham counts are new and welcome additions to the count table.

Because of the successful nature of the counts, a large number of noteworthy species were reported. The outstanding find was two Scissor-tailed Flycatchers in Iredell County. Also seldom reported on the Spring Count were seven Fulvous Tree Ducks at Wilmington, an amazing 35 White-winged Scoters at Morehead City (a species surprisingly missed on the 1973 Christmas Count), and a count period Common Redpoll at a feeder in Buncombe County. Noteworthy totals were the 232 Brown Pelicans at Charleston; 102 Wood Ducks, 27 Barred Owls, and 29 Cerulean Warblers at Roanoke Rapids; and grand totals (for all counts) of 126 Ospreys, 14 Tennessee Warblers, and 42 Bay-breasted Warblers. This was apparently the best spring ever for warblers, particularly the less common ones: the Nashville was reported on four counts, the Connecticut on three, and the Wilson's on seven! Surprisingly low grand totals were an astonishing 94 Herring Gulls and only one Bachman's Sparrow, a species that nests over much of the Carolinas. Many other noteworthy records were reported, and the reader should check the Compilers' Comments for further details.

On the negative side, the Spring Count doesn't seem to be growing in popularity, as only 24 counts were taken in the Carolinas. We currently have only three coastal counts. Someone should be able to stir up enough interest to initiate much-needed counts at Hilton Head and Bodie-Pea Island. Our coastal plain counts and observers are slowly falling by the wayside—only five counts were received from this region, and two of those are practically in the piedmont. Another dismal note is South Carolina's poor showing on the Spring Bird Count (not a new situation). Only four counts were taken in the Palmetto State, yet only two recorded more than 75 species! *Chat* definitely needs new counts from areas outside the North Carolina piedmont, but even new counts from this region would be greatly appreciated.

The reader will note that I have now assumed responsibility of editing the Spring and Christmas Bird Counts for CBC, having taking over from Eloise Potter, who will continue to prepare the count tables and provide guidance in this difficult job. I intend to be more strict in regard to questioning and deleting dubious reports on the counts. In fact, I have deleted several records of very rare or very late species reported on the counts without mention by the compilers. The following records were deleted: a *Philadelphia Vireo* from a location to the east of the piedmont (extremely rare); a *Rough-legged Hawk* and a *Tree Sparrow* from piedmont counts in May (extremely late); *Traill's Flycatchers* at two locations with no mention of the new species type (based on song); and incredibly late reports (by at least three weeks) of *Hermit Thrushes, Brown Creepers,* and *Golden-crowned Kinglets.* I accepted two reports of *Fox Sparrows* that I perhaps should have deleted, because this species should have left the Carolinas by late April. If a compiler or observer notices that a sighting of his has been deleted from the count table and he is convinced that his record is valid, he should send me full details of his sighting so that it can be published in *Chat*, probably in the Briefs for the Files section.

COMPILERS' COMMENTS

COAST

MOREHEAD CITY, N.C. (center: 0.7 mile NW of Crab Point in Newport River).

27 April. The 35 *White-winged Scoters* (Darryl Moffett) were migrating with *Surf* and *Black Scoters* along Bogue Bank. *Purple Gallinules* (Moffett, John Fussell Jr., Compiler, David Whitehurst, Ray Winstead) were at ponds at the Beaufort town dump and Pine Knoll Shores golf course. Four *Ground Doves* (Moffett) were at Fort Macon. This is the highest count ever for the species in the area. *Cape May Warbler* (Moffett), at Pine Knoll Shores, is a rare migrant in this area.—JOHN FUSSELL III, Box 520, Morehead City, N.C. 28557.

WILMINGTON, N.C. (center: Monkey Junction).

27 April. Large numbers of *Anhingas* were in a swamp which has been a nesting area for several years (Bud Needham, Billy Alexander). A few were also at Orton. *Canada Geese* (Katherine Alexander, Mary Urich, Charlotte Waggett), *Snow Goose* (white phase—Bobby Austin), and *Mallards* (Austin) are wild birds. The *Snow Goose* has been seen since January. *Purple Gallinules* (James Parnell, Robert Soots) were at Orton. *Fulvous Tree Ducks* apparently have been more plentiful this winter; four were at Orton and three at Snow's Cut (Parnell, Soots).—FRANCES NEEDHAM, Box 204, Wrightsville Beach, N.C. 28480.

CHARLESTON, S.C. (center: 14 miles NE of Mt. Pleasant and 0.5 mile E of US 17).

27 April. Some areas were inadequately covered. The *Nashville Warbler* (Perry Nugent, Tom Reeves) was observed for several minutes in excellent light. The bird was a male and all field marks were noted. The *Black-and-white, Blackpoll, Blackburnian,* and *Orange-crowned Warblers* were identified by their songs by Nugent and the Compiler through comparison with recordings. We are reasonably certain of these identifications. I have, however, eliminated from our count a possible *Chestnut-sided Warbler.* The bird was also identified by its song, but we are not absolutely convinced of the identification. [Identification of rare or out-of-range species by song only is risky, especially of some of the warblers. To be on the safe side, it might have been better also to have eliminated the *Orange-crowned* and *Blackburnian Warblers* from the count, though I have accepted both on the count table.—HL] Other (the same?) *Rose-breasted Grosbeaks* have appeared at feeders at a locality adjacent to the count area during the week of the count. [I seriously doubt the validity of all *eight Cooper's Hawks,* with no *Sharp-shinned Hawks* reported.—HL]—J.R. HARRISON, Biology Department, College of Charleston, Charleston, S.C. 29401.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: where Upper Goose Creek enters Pamlico River).

5 May.—GERALDINE COX, Route 1, Box 151A, Merritt, N.C. 28556.

PAMLICO COUNTY, N.C. (center: in Florence at intersection of 1324 and 1329).

28 April.—GERALDINE COX, address as above.

DILLON COUNTY, S.C. (center: Dillon).

1 May.—JOHN H. WILSON, Box 535, Dillon, S.C. 29536.

SOUTHERN PINES, N.C. (center: 1 mile NW of Skyline).

28 April. The two *Horned Grebes,* three *Double-crested Cormorants, Semipalmated Plover, Willet,* two *Herring Gulls,* and *Caspian Tern* were all observed by Edmund LeGrand

and Merrill Lynch at the newly-created Lake Surf. The *Willet* was the first record for the area, with all field marks and the call being noted; the *Caspian Tern* was the second record for the area. The three *Cattle Egrets* (Dana Carter, Compiler, Frances Needham, James Parnell), *Least Bittern* (Compiler, Parnell), and *Chestnut-sided Warbler* (Compiler, Needham) were also noteworthy.—J.H. CARTER III, P.O. Box 891, Southern Pines, N.C. 28387.

ROANOKE RAPIDS, N.C. (center: Weldon).

4 May. The count of 102 *Wood Ducks* included at least five broods totaling 48 ducklings. The two *Black-bellied Plovers* and the three *Dunlins* were seen by the Compiler on a mud flat at a Gaston construction site. The single *Cliff Swallow* was seen at a bridge across the Roanoke River at Roanoke Rapids. This was one of a pair that is attempting to nest there for the first time (Compiler). The *Wilson's Warbler* (Compiler) was a singing male observed near the Roanoke River in Weldon; all field marks, including the black cap, were noted. *Cerulean* and *Swainson's Warblers* were present again in substantial numbers this summer in Occoneechee Neck.—J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

PIEDMONT

HENDERSON, N.C. (center: Henderson).

4 May.—A.W. BACHMAN, 111 Jennette Avenue, Henderson, N.C. 27536.

RALEIGH, N.C. (center: Norfolk Southern R. R. crossing on Lake Wheeler Road).

27 April. The Raleigh count was preceded by 4 or 5 days of cool northerly winds which apparently retarded migration to some extent. Our total number of species (155) tops the previous high by two; however, for many of the transient species only one or two individuals were found. [Although *Chat* listed 153 species for the 1967 Raleigh Spring Count, the actual count was a still-standing record of 157 species, as four species I personally saw—*Horned Grebe, Least* and *American Bitterns,* and *Little Blue Heron*—were omitted from the list.—HL] Many of the winter residents, particularly waterfowl, had departed somewhat earlier than usual. *Ruby-crowned Kinglets*, however, were considerably more abundant than on previous spring counts. The *Swainson's Warbler* (Chris Marsh) was found along Swift Creek in exactly the same area where it was present into June last year. [Though the *Snowy Egret* and *Dunlin* were accepted, details on these species should have been mentioned.—HL]—R.J. HADER, 3313 Cheswick Drive, Raleigh, N.C. 27609.

DURHAM, N.C. (center: 1 mile N and 1 mile E of the intersection of US 501 and the Eno River).

28 April. The *Little Blue Heron* (Jim Dykes) was an unusual local spring find. Unusual shore birds included a count period *Semipalmated Plover* and count period *Short-billed Dowitcher* (Sebastian Patti) and two *Lesser Yellowlegs* (Stanley Alford, Angelo Capparella III, Chris Indorf), all at the Durham Northside sewer beds. A count period *Upland Sandpiper* was observed by Carlie Carter and the Compiler. The *Chuck-will's-widow* (Patti) was heard calling in the Duke Forest. The *Least Flycatcher* (Joe Roller) was seen and heard along the Eno River. The *Short-billed Marsh Wren* was carefully identified by Russell Hoverman. The *Golden-winged Warbler* (Roller) was heard calling along the Eno River.—ROBIN M. CARTER, 1605-H Sedgefield Street, Durham, N.C. 27705.

CHAPEL HILL, N.C. (center: Franklin and Columbia Streets).

5 May. Our totals were near average despite rain and cold (our low temperature came at midday!). The *Tennessee Warbler* (Stanley Alford) was one of a number of local records this spring. The *Common Gallinule* (Carlie Carter, Robin Carter) was at Hogan's Pond where there have been repeated winter records. It was a first for our spring counts, as were a *Least Flycatcher* (Johnnie Payne) and a singing male *Wilson's Warbler* (Compiler).—JAMES O. PULLMAN, Route 6, Box 149, Chapel Hill, N.C. 27514.

GREENSBORO, N.C. (center: transmitter of Radio Station WBIG).

4 May. The nine *Red-breasted Mergansers* (George Smith) are the most reported for this

area at this time of year. The *Wilson's Warbler* (Compiler, Jim Weigand) has been reported on only three previous spring counts. [The *Philadelphia Vireo* was accepted reluctantly; it should have been mentioned as unusual by the Compiler.—HL]—DONALD F. ALLEN, 2611 David Caldwell Drive, Greensboro, N.C. 27408.

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Parkway).

4 May. The adult *Little Blue Heron* was photographed by Jerry Shiffert, and the *Cattle Egret* (Fran Baldwin, Wayne Irvin) was in breeding plumage. The *Least Bittern* (Baldwin, Paul Spain, Ramona Snavely) was seen on several days. The *Common Merganser* was seen by Hank and Kay Kudlinski. Mary Ericson watched the singing *Nashville Warbler*, one of several seen this spring. The *Connecticut Warbler* (Jerry Shiffert), watched closely, is a rare but regular migrant in spring over the last several years. The *Ringed Turtle Doves* (Bob Witherington, Charles Frost) are a feral colony. The shore birds were seen at a sewage treatment plant. The warbler migration was excellent.—C. ROYCE HOUGH, 713 Lankashire Road, Winston-Salem, N.C. 27106.

IREDELL COUNTY, N.C. (center: South Yadkin River bridge on Chipley Ford Road).

11 May. The *Scissor-tailed Flycatchers* were observed by Jane Mullen. [No further details were received.—HL] Lois Goforth saw the *Cattle Egrets* and Sam Cathey saw the *Wilson's Warbler*. The *Tennessee Warbler* was seen by five people, and all eight field observers saw the *Black-billed Cuckoo* and *Canada Warbler*. An unusually large number of tanagers and *Rose-breasted Grosbeaks* were seen this spring, especially during the first week in May.—JANE S. MULLEN, 908 W. Front Street, Statesville, N.C. 28677.

STANLY COUNTY, N.C. (center: 2 miles NW of Badin).

27 April. The *Saw-whet Owl* was seen by Naomi Goforth at a Girl Scout camp. Also unusual were a *Common Loon* (Compiler, Barrett Crook) and a *Worm-eating Warbler* (Vera Littleton, Virginia Foglio). The 11 *Ospreys* are encouraging, and *Eastern Bluebirds* are still increasing in rural areas. Many winter visitors were still at feeders. [Their presence indicates that the count was held too early in the spring; early May for the piedmont of North Carolina would better hit the peak of the spring migration.—HL]—MRS. BARRETT CROOK, Route 2, Box 54, New London, N.C. 28127.

CHARLOTTE, N.C. (center: intersection of South Boulevard and Woodlawn Road).

4 May. The *Wood Duck* count was represented by nine adults and 16 young. The *Canada Goose* count included four adults and seven young. *Cliff Swallows* were nesting under Wither's Bridge on the Catawba River. The *Least Sandpiper* was recorded for the third year in a row in York County, S.C. (Flo Cobey). *Yellow-bellied Sapsuckers* and *Pine Siskins* were late for the area.—ED READ, 1101 Rosewood Circle, Charlotte, N.C. 28211.

GREENVILLE, S.C. (center: intersection of highways 29 and 291).

4 May.—ROSA LEE HARDIN, Cleveland, S.C. 29635.

CLEMSON, S.C. (center: 3.5 miles SW of the intersection of US 76 and SC 93).

4 May. *Little Blue Heron* and *Yellow-crowned Night Heron* (both adults), nearly all of the shore birds, and all of the marsh birds were seen by the Compiler at Lake Hartwell marshes on Eighteenmile Creek and Little Beaverdam Creek. Sidney Gauthreaux recorded the singing *Least Flycatcher* and the *Lincoln's Sparrow* (seen well at 15 feet). James Hebrard observed the *Nashville Warbler,* noting the eye-ring, gray head, and yellow throat. *Blackburnian Warblers* were unusually numerous. A full-plumaged *Laughing Gull* was seen on two occasions the week before the count, and approximately 12 *Forster's Terns* were over the lake the day following the count.—HARRY E. LeGRAND JR., Department of Zoology, Clemson University, Clemson, S.C. 29631.

ELKIN-RONDA, N.C. (center: 3 miles N of Elkin on US 21).

5 May. The all-day rain severely hurt the count.—LIN HENDREN, P.O. Box 148, Elkin, N.C. 28621.

CALDWELL COUNTY, N.C. (center: Lenoir).

25 April. The Orin Whiteners reported a pair of *Brown-headed Nuthatches* nesting in their yard in Lenoir this spring, a first for this area.—HELEN E. MYERS, 310 Beall Street NW, Lenoir, N.C. 28645.

MOUNTAINS

YANCEY-McDOWELL COUNTIES, N.C. (center: 2.3 miles S. of Buck Creek Gap on NC 80).

27 April. One *Greater Yellowlegs* (Compiler) was in a marshy area near Greenlee and two were at Morgan Lake; they were identified by the call and size. The *Yellow-bellied Flycatcher* and two *Olive-sided Flycatchers* were seen and heard by the Compiler on Mt. Mitchell. *Least Flycatchers* (Hall party) were unusually numerous; all were identified by the *che-bek* call. The *Prothonotary Warbler* (Hall party), seen and heard along the Catawba River in the Greenlee area, seems to be an uncommon but regular migrant here. The *Connecticut Warbler* (Compiler) was seen as close as 5 feet in an underbrush of small conifers; the gray hood and solid white eye-ring were seen.—WALTER HALL, Route 8, Box 1136, Asheville, N.C. 28806.

BUNCOMBE COUNTY, N.C. (center: intersection of US 70 and SR 2740 in Swannanoa).

4 May. One of the *Green Herons* (Linda Durham) was on a nest in a small grove of pines approximately 30 feet from a newly constructed home near Fairview; later three young were found in the nest. A *Mallard* (Compiler, Roland Sargent) was flushed from a nest containing 10 eggs near a reservoir in a wild area in North Fork. The *Osprey* (Compiler, Sargent) was circling over North Fork Reservoir. A *Peregrine Falcon* (Chris Rustay) was seen in Kenilworth Forest on 2 May. The *Willow Flycatcher*, *Water Pipit*, *Lawrence's Warbler* (hybrid), and *Lincoln's Sparrow* were all observed by Mark and Walter Hall in the Fairview area; all field marks were visible on the *Lawrence's Warbler*. The *Cerulean Warbler* (Dennis Carter) was a male at Mile Post 386.5 on the Blue Ridge Parkway. The *Common Redpoll* (Mary Respess) was a regular feeder visitor in Oteen for several days before the count day, and two *Tree Sparrows* (Lewis and Meryle Kort) were found near Fairview. [I am skeptical of *Tree Sparrows* reported on spring counts, and this record is accepted only because it was mentioned as unusual. I reluctantly accepted the seven *Fox Sparrows* without details; in the future observers and compilers should submit details when this species is reported on a Spring Count.—HL]—ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

BREVARD, N.C. (center: 7 miles SE of Brevard at junction of US 276 and SR 1584).

18 May. A number of late departures were apparent: *Marsh Hawk* (Patrick and Rick Bohan) in the piedmont south of Caesar's Head in South Carolina, an *Evening Grosbeak* (Mr. and Mrs. Hugh Hollifield) and a *Purple Finch* (Lydia and Paul Barrett) at feeders, and a *Fox Sparrow* (Louise Davidson) seen in a yard. [I am suspicious of *Fox Sparrows* on spring counts, and this extremely late record is accepted only because it was mentioned as unusually late.—HL]—WALTER C. HOLLAND JR., 290 Maple Street, Brevard, N.C. 28712.

FIELD OBSERVERS

[Compilers are requested to save space by omitting titles (Miss, Ms., Mrs., Mr., Dr., Rev., Col.) if possible.—HL]

MOREHEAD CITY, N.C.: Clint and Doris Benbow, Dennis Chadwick, Alfred and Janet Chestnut, Judy Eubanks, Billy Freeman, John Fussell Jr., John Fussell III, Bill Laughinghouse, Joyce Lewis, Charles Lincoln, Don McCrimmon, Darryl Moffett, Doris Oakley, Bob and Mary Simpson, Mrs. Daniel Vaughn, E.N. Warner, David Whitehurst, Ray Winstead.

WILMINGTON, N.C.: Billy Alexander, Katherine Alexander, Edna Appleberry, Roxana Atwood, Bobby Austin, Bobbie Boney, Alice Brown, Robert Brown, Dana Carter, J.H. Carter III, David DuMond, Dot Earle, William Greene, Maudel and Pat Hunt, Kitty Kosh, Greg Massey, Polly Mebane, Bud Needham, Frances Needham, Ann Nicholson, James Parnell, Marge Senninger, Robert Soots, Charlotte Waggett.

CHARLESTON, S.C.: Ted Beckett, E.B. Chamberlain, David Chamberlain, Calvin Clyde, Cindy Floyd, Dennis Forsythe, Emily Grimball, Andy Harrison, Julian Harrison, David and Bobbin Huff, Evan Hyde, Pete Laurie, David Lourie, Bill McIntosh, Perry Nugent, Frederick Probst, Zack and Francis Ralston, John and Mary Reed, Tom Reeves, Arthur and Gayle Smith, Grant and Lee Ann Staley.

BEAUFORT COUNTY, N.C.: Ethel Barkley, Edwin Brinson, Geraldine Cox, James McLaurin, Mary McLaurin, Glenn Paul, Louise Satterthwaite.

PAMLICO COUNTY, N.C.: Edwin Brinson, Geraldine Cox, Billy Holton, Glenn Paul.

DILLON COUNTY, S.C.: Mrs. Mamie Bradfield, Mrs. Lois McCallum, Marion McCallum, Mrs. Mary Turbeville, John H. Wilson.

SOUTHERN PINES, N.C.: Bobby Austin, Dana Carter, Eleanor Carter, J.H. Carter III, Laurence Davis, Roberta Davis, L.M. Goodwin Jr., Edmund LeGrand, Merrill Lynch, Frances Needham, James F. Parnell, Lura Williams, Mary K. Wintyen, Ethel Wotton.

ROANOKE RAPIDS, N.C.: Joyce Bennett, Betty and Lloyd Davis, Tom Howard, David Knapp, Ken Knapp, J. Merrill Lynch, Louise Parker, David Whitehurst, John Wright.

HENDERSON, N.C.: Mrs. William Adcock, Neita Allen, Mr. and Mrs. A.W. Bachman, Annie Gray Burroughs, Ruth Carter, Mrs. Sam Harris, Mrs. Russell Parham, Mrs. Howard Stewart, Dr. and Mrs. Paul Stewart, Mrs. J.D. Williams.

RALEIGH, N.C.: Betty Anderson, Joyce Bennett, Bill Brown, Isabelle Cannon, Betty and Lloyd Davis, Ricky Davis, John C. Edwards, Charlotte H. Green, R.J. Hader, Jeanne and Ray Halsey, Larry Halsey, Derric Hamrick, Tom Howard, Bobby Kluttz, Ken and David Knapp, Connie and Arnold Krochmal, Mrs. William Lassiter, Janice and Joshua Lee, Edmund LeGrand, Linda Lentjes, Bill Lisowsky, Merrill Lynch, Corinne and Joe Marlin, Chris Marsh, Lisa Marsh, Edna Miller, Jim Mulholland, Sebastian Patti, Eloise and Jack Potter, James Pullman, T.L. Quay, Terry Sharpe, Mary and Ben Smith, Elizabeth and Robert Teulings, Gwen Turbiville, Gail Whitehurst, Harriet Wilson, John Wright.

DURHAM, N.C.: Stanley Alford, Norman Budnitz, Mrs. J.C. Callaghan, Angelo Capparella III, Carlie Carter, Robin Carter, Jim Dykes, Eric Garner, Jasper Garner, Lois Garner, Russell Hoverman, Alexander Hull, Chris Indorf, Rusty Latta, Gertrude London, David McConnell, Jimmy McConnell, Owen McConnell, Pat McConnell, David Morris, Sebastian Patti, Mrs. Paul S. Payne, James Pullman, Joe Roller, Mike Schultz, Wilma Stuart, Elizabeth Teulings, Robert Teulings, Dennis Wingel.

CHAPEL HILL, N.C.: Stanley Alford, Charles Blake, Geraldine Bodie, Annie Leigh Broughton, Carol Callaghan, Angelo Capparella III, Carlie Carter, Robin Carter, Eric Garner, Jay Garner, Lois Garner, Paul Koepke, Wilhelmina Lemen, Gertrude London, Johnnie Payne, James Pullman, Elizabeth Teulings, Robert Teulings, Bill Wagner, Margaret Wagner, Eleanor Wagstaff.

GREENSBORO, N.C.: Carolyn and Don Allen, Rose Avery, Virginia Bell, Fred Berry, Edwin Blitch, Inez Coldwell, Charlotte Dawley, Frank and Mildred Fish, Dot Garrett, Isabel Gillespie, Nancy Hannah, Ellen Knight, Ben and Kathryn Lambeth, Bob Lashley, Jean McCoy, Ida Mitchell, Beryl Norcross, Emma Leah Perrett, Etta Schiffman, Virginia Seawell, Catherine Shaftesbury, George Smith, Tom Street, Marjorie and William Tays, Joan Tipton, Jim Weigand, Daphne Weisner, Maude Williams, Helen Zuk.

WINSTON-SALEM, N.C.: Fran Baldwin, Bill Boice, Olive Boice, Jim Culbertson, Patti Culbertson, Mary Ericson, Charles Frost, Gardner Gidley, Margaret Gidley, Fred Hill, Ruth Hill, Kevin Hintsa, Jean Hobson, Michael Hough, Royce Hough, Wayne Irvin, Lacy James, Mike Kalet, Charlene Knertz, Hank Kudlinski, Kay Kudlinski, Dwight Lee, Polly Lee, Janice Levitt, Connie Lincke, Ann Listokin, Hewson Michie, Sue Moore, Cynthia Olsen, Mary Olsen, Jim Orgain, George Morgan, Margaret Morgan, Ogigico Ottonian, Molly Parker, Ann Pollard, Jackie Shelton, Dot Shiffert, Jerry Shiffert, Ramona Snavely, S.C. Sommer, Paul Spain, Edie Spinks, Anita Surbah, Royce Weatherly Jr., Royce Weatherly Sr., Bob Witherington.

IREDELL COUNTY, N.C.: Millicent Benbow, Sam Cathey, Lois Goforth, Dwayne Hayes, Flippen Jones, Mrs. Joe Kezlan, Gene Lederer, Larry Marlin, Bobby Mize, Jane Mullen.

STANLY COUNTY, N.C.: Raymond Barker, Margaret Crawley, Barrett Crook, Vera Crook, Virginia Foglio, Terry Hahn, Anne Hatley, Bill Hatley, Nelle Hinson, Grover Kimrey, Janie Kimrey, Vera Littleton, David McCarn, Ruth Moose, Harold Morris, Ann Olsen, Frankie Treadaway, John Whitlock, Vivian Whitlock.

CHARLOTTE, N.C.: Gen Barber, Jerry Borror, Elizabeth Clarkson, Elizabeth Cobey, Flo Cobey, Adrian Dykema, Beth Dykema, Gwen Fenninger, Ron Gestwicki, Ted Moore, Becky Norwood, Joe Norwood, Ed Read (Mecklenburg Audubon Society and guests).

GREENVILLE, S.C.: Ruth Gilreath, Rosa Lee Hardin, Gladys Hart, Lillie Hart, Martha Lawrence, W.B. Lawrence, May Puett.

CLEMSON, S.C.: Sidney Gauthreaux, Harry LeGrand.

ELKIN-RONDA, N.C.: David Hasse, Lee Hasse, Lin Hendren, Ola Hendren, Bobby Tysinger, Charles Tysinger, Jerry Tysinger.

CALDWELL COUNTY, N.C.: Mrs. W.A. Alexander, Mrs. Austin Allen, Mrs. Clarence Beach, Isabel Bernhardt, Mrs. John Bost, Mrs. Clayton Fisher, William Happer, Mr. and Mrs. C.G. Hughes, Mr. and Mrs. Fred May, Helen Myers, Mr. and Mrs. Henry Parker, Mrs. David Porter, Mrs. George Robbins, Mrs. Jim Walton, Mrs. C.S. Warren, Mr. and Mrs. Dickson Whisnant, Mrs. Orin Whitener, Mrs. Ainsley Whitman, Mrs. Jim Wood.

YANCEY-McDOWELL COUNTIES, N.C.: Joy Hall, Joyce Hall, Mark Hall, Walter Hall, Robert Ruiz, Doris Sargent, Roland Sargent.

BUNCOMBE COUNTY, N.C.: Mrs. William Adams, Robert Bruce, Dennis Carter, E. Chandler, Frank Chandler, Nora Cline, Linda Durham, Mark Hall, Walter Hall, Carol Jones, Lewis Kort, Meryle Kort, Gordon Mahy, Mary Respess, Betty Ruiz, Robert Ruiz, Chris Rustay, Holly Rustay, Wendy Rustay, Roland Sargent, Mary Sawyer, Alec Southard, Thomas Wood, Vertice Wood.

BREVARD, N.C.: Glenna Ball, Herb Ball, Lydia Barrett, Paul Barrett, Mrs. George Blaha, Patrick Bohan, Rick Bohan, Mabel Boulet, Harry Boulet, Ellen Cook, Louise Davidson, Connie Foster, Ercel Francis, George Francis, Doris Guest, Frank Guest, Frances Hall, Byrniece Hansbrough, Ed Hansbrough, Helen Hardin, Rosa Lee Hardin, Curt Holland, Susan Holland, Walter Holland, Mr. and Mrs. Hugh Hollifield, Sue Hux, Earle Kersh, Judy Kersh, Ann Lyon, Gaylord Lyon, DeWitt Parsons, Helen Parsons, Mr. and Mrs. Joseph Paxton, Gladys Reese, Hazel Roberts, Hervey Roberts, Mary Roberts, Claudia Sanders, Annette Sprott, Claude Viens, Eleanor Viens, Art Wood, Marie Wood.

CHRISTMAS BIRD COUNT

Dates:
14 through 31 December 1974

Local compilers please note:

- If you did not have a count in 1973, request 1974 form from Eloise F. Potter, P.O. Box 277, Zebulon, N.C. 27597.
- Return completed form to above address by 15 January 1975.
- Read article beginning on page 53 in this issue of *Chat* for further information on conducting and reporting Christmas and Spring Bird Counts.

CBC Roundtable

... with Louis C. Fink

Recommended Purchase

The U.S. Department of the Interior has published "Fifty Birds of Town and City," 50 pages approximately 6 x 9 inches, containing full-color bird paintings by Bob Hines and edited by Peter A. Anastasi. All 50 of the birds described are common in the Carolinas, and the text will help a beginner to identify them. If anything, the colors are exaggerated, but this makes the book especially attractive to beginners and children. It makes an excellent gift. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Price $4 cloth; $1.05 paper. Stock Number 2410-0332.

Bird Finding in the Carolinas

Drive east on US 64 to Creswell, N.C. and follow the signs about 9 miles to Pettigrew State Park, which is adjacent to Somerset Place State Historic Site and includes Lake Phelps. The swamp land was developed in the 1780s as a rice plantation, later becoming the plantation home of Josiah Collins. Shaded paths around the lake provide an abundance of land birds (woodpeckers, warblers, thrushes), while the lake produces ducks, loons, grebes, and egrets.The manor house is open to public inspection and gives a good view of Colonial living.

* * * * *

Through the courtesy of Dr. Josh Lee, here is a list of Research Stations in North Carolina. Many of these offer interesting areas for bird study and permission to enter the grounds usually may be obtained by calling in advance.

Border Belt Tobacco Research Station, Whiteville (Wallace A. Dickens, 648-4703).
Central Crops Research Station, Clayton (W.C. Allsbrook, 553-6468).
Harbour House Marine Science Center, Wrightsville Beach (Durwood Baggett, 256-3736).
Hatteras Marine Research Station, Hatteras (W.W. Hassler, 995-5146).
Horticultural Crops Research Station, Castle Hayne (Fred Cumbo, 675-2314).
Horticultural Crops Research Station, Clinton (B.N. Ayscue, 592-7839).
IES Eastern Area Office, New Bern (Walter Erwin).
Marine Sciences Project, New Bern (Norman Angel, 637-6272).
Lower Coastal Plains Tobacco Station, Kinston (S.T. Barnes, 527-3579).
Pamlico Marine Laboratory, Aurora (J.E. Hobbie, 332-5542).
Peanut Belt Research Station, Lewiston (W.R. Baker Jr., 397-2213).
Tidewater Research Station, Plymouth (John W. Smith, 793-2049).
Upper Coastal Plains Research Station, Rocky Mount (J.W. Sumner, 442-7326).

General Field Notes

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POLICY STATEMENT
ON EXOTIC WATERFOWL RECORDS

Reports of exotic waterfowl present a special problem. Waterfowl possess a great ability to traverse most geographic barriers, and wanderers do find their way far beyond their normal ranges. This is complicated, however, by the fact that exotic waterfowl are raised in this state by many aviculturalists, and escapes do occur. While most people pinion their birds to prevent flight, some do not; therefore, it is often impossible to determine whether a rare duck or goose is a wanderer from some far place or an escaped bird from some much closer collection of exotic waterfowl. Plumage and health conditions, while sometimes proving a bird to be an escape, can never prove one to be wild.

It is the practice of this editor to accept well documented records, such as the one below, but only after some delay to allow an effort to be made to determine whether or not the bird was an escape. It often takes some time for such information to surface. The publication of such a record does not mean that the bird has been accepted as a documented state record. It does make the information available to all. At times the publication of such a record in *Chat* may bring forth information that will help to determine the origin of the bird. In other cases subsequent observations may help to establish a trend that lends strength to the original record.

Such conditional acceptance in no way reflects unfavorably upon an individual who has made an observation and who has presented all of the facts at his disposal.—DEPT. ED.

Mandarin Duck in Eastern North Carolina

ROBERT P. HOLMES
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On 25 May 1972, I was shown a drake Mandarin Duck *(Aix galericulata)* shot that day by James Boyd and B.H. Oates Jr. of New Bern, N.C. The identification of this species is so obvious that there is no need to belabor its description. I am not aware of a previous North Carolina record for this species. This individual was taken on a small woods pond off the Trent River in Craven County, N.C.

One consideration might be that this duck had escaped from some collection of pen-raised ducks. I do not believe this to be the case. The bird was reported to have flown strongly. It was in its natural habitat, a wooded pond, and was associated with its North American relative, the Wood Duck *(Aix sponsa).* I carefully examined the specimen and found its plumage to be full, brilliant, and immaculate—in contrast to the usually dull and frayed appearence of pen-raised birds.

The Mandarin Duck has been naturalized in Western Europe for a number of years (*A Field Guide to the Birds of Britain and Europe,* Peterson et. al., 1966). It is my suggestion that this individual, like the Eurasian Green-winged Teal *(Anas crecca)* and European Wigeon *(Anas penelope)* strayed from there. The skin is now preserved as a mounted specimen in the collection of Ralph Morris.

[See "Policy Statement on Exotic Waterfowl Records" published elsewhere in this issue of *Chat.*—DEPT. ED.]

Golden Eagle in Eastern North Carolina

WILLIAM BROWN JR.
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JOSHUA A. LEE
5104 Newcastle Road, Raleigh, N.C.

At 14:00 on 23 October 1973, we observed a mature Golden Eagle *(Aquila chrysaetos)* at the Upper Coastal Plains Research Station about 10 miles SE of Tarboro, N.C. When first seen the eagle was flapping and gliding over a cleared area on the edge of the station property. A Turkey Vulture *(Cathartes aura)* was circling nearby, and the contrast in wingspan, angle of wings, and mode of flapping allowed us to identify the bird as a eagle immediately.

As the eagle sailed overhead at about 100 feet altitude, we noted that it was deep brown in color with the base of the tail feathers white. The wings were proportionally broader in relation to their length than in the Bald Eagle *(Haliaetus leucocephalus).* The secondaries shortened abruptly next to the body. All of the above features are helpful in separating the Golden Eagle from the Bald Eagle.

After gaining an altitude of about 300 feet the eagle glided about 2 miles on set wings to the vicinity of a small swamp south of the station. We followed the bird and again observed it from about 100 feet as it glided over a small pasture. William Brown at this time noted small white wing patches as the bird wheeled to fly over the swamp. In the Golden Eagle, white shoulder patches occur in birds from Scotland and eastern Canada (Amadon and Brown, *Hawks, Eagles and Vultures of the World*). We concluded that the bird was a mature Golden Eagle, and probably a female as we estimated the wingspread at over 7 feet.

Red Phalarope in Wake County, N.C.

CHRIS MARSH
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ROBERT J. HADER
3313 Cheswick Drive, Raleigh, N.C. 27609

1 February 1974

On 27 October 1973 Robert J. Hader spotted a phalarope while scanning Lake Benson for waterfowl; however, he was unable to see it well enough for satisfactory specific identification. On the following day Chris Marsh and David Whitehurst found the bird, and Marsh was able to wade to within 30 feet of where it was feeding on an island mudflat. From the black eye patch, uniform gray back, white forehead, wing pattern, and thick bill, it was identified as a Red Phalarope *(Phalaropus fulicarius).* The solid black bill was puzzling until we learned that immatures may lack the yellow base, which is characteristic of adults. The bird remained in the vicinity until 31 October and was seen at close range by several other observers. Marsh obtained several photographs.

A search through *The Chat* showed six previous inland records of the Red Phalarope in North Carolina. Perhaps the most interesting record was that of one kept alive from 21 to 24 March 1888 at Wake Forest by W.L. Poteat (*Chat,* 26:55). This record was overlooked by the authors of *Birds of North Carolina* and by Hader in his "Species List of Birds of Wake County, N.C." (*Chat,* 33:53-71). The other inland records are from Rocky Mount on 16 November 1939 (Pearson, Brimley, and Brimley, *Birds of North Carolina,* 1942, revised Wray and Davis, 1959); Lenoir on 1 January 1947 (*Chat,* 11:50); Fontana Lake on 2 October 1949 (*Chat,* 13:72); North Wilkesboro on 16 October (*Chat,* 24:24-25), and Fayetteville on 5 December 1960 (*Chat,* 25:16).

Least Terns in a Cantaloupe Patch

PERRY NUGENT
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12 June 1974

On 17 May 1971, while walking into a large cantaloupe field at the U.S. Vegetable Breeding Laboratory located about 7 miles S of Charleston, S.C., I was met by a group of dive-bombing Least Terns *(Sterna albifrons).* The air was full of them, dive-bombing, screaming, and beak-clicking at my head. This behavior suggested nests, which were soon discovered.

Although eight pairs of adult terns were present in the area, only seven nests, each with one or two mottled eggs, were found. The nests were placed in depressions on barrier paper-mulched, 80-inch wide, cantaloupe beds. During the next 3 weeks, two clutches were eaten by a fox, one was destroyed in a weeding operation, two were abandoned when cantaloupe vines overgrew them, and two apparently hatched, although no young were seen. Adult terns carried small fish to the area of the last two nests, evidently feeding young, but vine growth made it impossible to see them.

In mid-April 1972, while three fields near the site of the 1971 nests were being planted, four Least Terns landed in the middle one. Over the next three days they were there regularly. As we approached the area during a planting operation on the third day, I noticed one tern spinning a depression in the paper. Thinking this bird might be established a nest, I carefully noted the row number for future observation. Later in the day I attempted to locate the nest, but without success. Our activities probably discouraged the terns, for they flew away and did not return.

Least Terns are seen occasionally over the irrigation ponds along the tidal creek that borders the laboratory property, and sometimes in recently plowed fields in company with Ring-billed and Laughing Gulls; however, nests were unknown in our fields prior to 1971.

Why would Least Terns choose a paper-mulched cantaloupe field in preference to the usual sandy beach nesting sites several miles away? Perhaps there was some resemblance between these fields and sandy beaches. The question is difficult to answer, for color appears to be the only common factor in both sites. The cantaloupe plants were very small when the birds initially chose the field site, and the color of the fields was tan with small green patches.

Possible Summer Resident Nighthawks at Brevard, N.C.

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20 January 1973

The Common Nighthawk *(Chordeiles minor)* has been observed during the summer of 1972 in the mountain town of Brevard, N.C., elevation 2,250 feet. Although common at lower altitudes, nighthawks are rare in the mountains except during the fall migration. The following, therefore, is of interest.

At approximately 18:40 EDT on 24 May, a lone bird was sighted from our back yard, which is located in a wooded, residential section approximately ¾ mile S of the center of town. The nighthawk approached from the south, flew almost directly overhead (at which time the white wing patches were clearly visible in a bright sky), and continued the unusual arrow-like path due north toward the center of Brevard. As a result of this sighting, particular attention was paid to the sky during June bicycle-birding trips along the fields and streams bordering the southern edge of Brevard. No nighthawks could be found in these semirural areas. July field trips also failed to turn up any nighthawks in these areas.

On an unusual bicycle trip through the center of town on 6 August, a nighthawk's call was heard at approximately 20:20. One bird finally was located over one of the downtown buildings. Due to the darkness of the sky (heavy clouds as well as lateness), wing patches could not be discerned; however, calls, wing shape, and characteristic erratic feeding flight provided positive identification of this species, which I have observed many times during its fall migration through here and during summer business trips to Midwestern cities where it is a common breeder. The following evening, 10 x 50 binoculars were carried along. No nighthawks could be found over the fields, but at approximately 20:05 one was seen in the same downtown location. Wing patches were distinct. Feeding seemed limited to a two-block area.

No nighthawks were found over the fields on 13 or 15 August. The downtown area was not checked on the 13th, but on the 15th, five nighthawks were observed. One or two were calling. Seven nighthawks were seen briefly over the fields on 19 August; one was there on 27 August; four were present 28 August. The fall migration began in earnest on 29 August and continued through 27 September.

The downtown sightings of 6 and 7 August are not proof of residence, as the area had not been canvassed at any previous time during the summer. The additional birds observed downtown on 15 August may or may not have been juveniles raised here.

Although further field work will be required to determine whether or not this species may be breeding here, its very presence in late May and early August is noteworthy. In *Notes on the Birds of Great Smoky Mountains National Park* (Stupka, University of Tennessee Press, 1963) all references to nighthawks are at altitudes below 1,900 feet and on dates prior to 24 June or after 12 August. It is stated that no young or eggs have been found in the Park. Charles D. Hutchinson's mimeographed "Birds of Western North Carolina Check List," 1967, lists nighthawks as occurring in August as migrants. During the 1970, 1971, and 1972 Spring Bird Counts (late April and early May) in the mountain counties of Ashe, Avery, Buncombe, McDowell, and Yancey, as compiled in *The Chat,* no nighthawks were found.

ADDENDUM: During the summers of 1973 and 1974 I observed a single pair of Common Nighthawks flying over the same area. I have been unable to gain access to the tops of buildings to search for eggs.—W.C. HOLLAND JR.

A New Species for South Carolina: Fork-tailed Flycatcher Photographed on Bull's Island

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On 1 November 1973 a Fork-tailed Flycatcher *(Muscivora tyrannus)* was observed for half an hour by me and three other persons on Bull's Island, South Carolina. As luck would have it, I had brought my 275 mm lens along (attached to a Pentax camera), and I was able to photograph the bird with ease (Figure 1).

Although this is the first record of the species for South Carolina, it has been sighted on at least two other occasions in the southeastern United States. Sprunt (*Florida Bird*

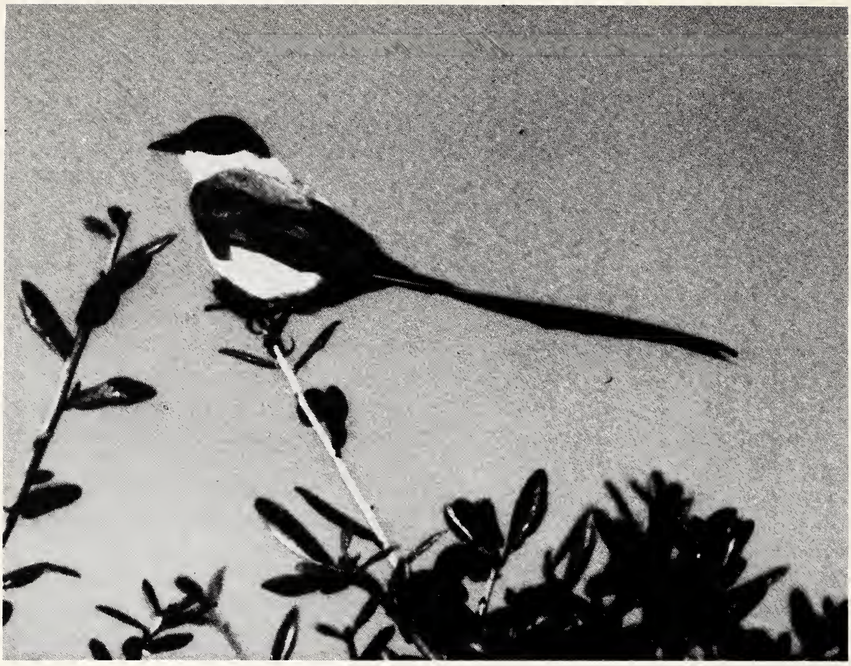

Figure 1. A Fork-tailed Flycatcher was photographed on Bull's Island in the Cape Romain National Wildlife Refuge on 1 November 1973, providing the first positive record of this tropical species for South Carolina. (Photo by John Henry Dick)

Life, 1954, p. 500) places an apparently reliable Florida record on the hypothetical list for that state. Bent (*Life Histories of North American Flycatchers, Larks, Swallows, and their Allies,* 1942, p. 82) lists records for Mississippi as well as California, Kentucky, Maine, Massachussets, Michigan, New Jersey, and Pennsylvania. One of the New Jersey records and those for California and Michigan are indefinite; specimens said to have been taken are either lost or destroyed. Danzenbaker (*Cassinia,* 54:32) describes several recent records of the species for New Jersey. It may be of interest to point out that a specimen collected by Audubon near Camden, New Jersey, in June 1832, served as the model for one of the most beautiful plates in his magnificent Elephant Folio.

On the date of the record reported here, Gardner D. Stout (President, American Museum of Natural History) and I were spending the day on Bull's Island. Burkett S. Neely (Superintendent, Cape Romain National Wildlife Refuge) provided red carpet treatment and drove us about the island in his jeep. As this was the first week of the refuge's annual bow and arrow hunt, he kept in touch with his staff by walkie-talkie. One of the hunters passed the word around that he had seen a flycatcher-like bird with an extremely long tail sitting on a telephone wire near Summerhouse Pond on the island's south end. We drove immediately to the area and spotted the bird on the wire. Thinking it to be a Scissor-tailed Flycatcher (rare but seen at irregular intervals in the area), I busied myself with putting the camera together and stalking the bird for a shot. Then, in a loud clear voice, Gardner Stout identified it as a Fork-tailed.

The bird was an adult in fine plumage with streaming tail feathers almost a foot long. Several times it left the wire hawking after insects, and each time it returned to land, the tail was opened completely like great shears, then closed to nearly a single streamer. Twice it landed at eye level on a Cassina bush, which gave me the chance hoped for with the camera.

L. Irby Davis (*A Field Guide to the Birds of Mexico and Central America,* 1972, p. 129), who refers to the species as the "Swallow-tailed Flycatcher," gives the normal range as Mexico to Argentina. It is possible that tropical storm Gilda, which moved up the East Coast several weeks prior to the date of our observation, carried the flycatcher to this area. Several people attempted to relocate the bird the weekend of 3 November 1973, but without success.

[For those unfamiliar with the Fork-tailed, it is a large, kingbird-sized flycatcher with pure white underparts, a gray back, black crown, and a long black scissor-like tail. Both sexes have a concealed yellow crown patch, smaller in the female. The species is figured on plate 28 of L. Irby Davis' book and plate 29 of Peterson's new *Field Guide to the Birds of Mexico.*—JRH]

Nesting Ravens on Pilot Mountain

RAMONA R. SNAVELY
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10 April 1974

On 22 March 1974 a team comprised of Fran Baldwin, Ruth Hill, Jerry Shiffert, Ramona Snavely, Paul Spain, and Park Ranger Jonathan Wild confirmed the nesting of Common Ravens (*Corvus corax*) on the pinnacle of Pilot Mountain (elevation, 2,440 feet) in Surry County, N.C. The nest was located on the east side of the pinnacle on a rock ledge with a larger rock ledge diagonally overhanging the nest on the left side. It is quite inaccessable and very difficult to reach.

The nest was a large bulky structure about 16 to 20 inches outside diameter and about 10 to 12 inches inside diameter consisting of large twigs ¼ to ½ inch in diameter. The young could not be seen in the nest because observation had to be made from below rather than above. Two and possibly three young were heard calling each time the adults approached the nest. The adults were seen carrying food but fed the young only once while we were present. Numerous photographs were taken of the nest, the surrounding habitat, and the adult birds.

A second visit was made on 7 April 1974 by Wayne Irvin and Jonathan Wild. On this occasion two young and possibly a third one were seen peering above the nest. The adults fed the young, and photographs were taken.

Sprague's Pipit in Northern South Carolina

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About 15:00 on 25 January 1973, we visited Creech's Pond in northeastern York County, S.C., approximately 1/4 mile from the North Carolina state line. The area consists of large pastures with grazing cattle and two ponds, one about 4 acres in size, the other 1 acre. The smaller pond has a marshy area, and both have mud flats which attract migratory shore birds. Overwintering ducks and geese are usually present, but on this date only a Pied-billed Grebe, female Bufflehead, and Ruddy Duck were on the larger pond.

While scouring the fields for Horned Larks, William Cobey noticed what appeared to be a small dark sparrow about 50 feet away. It walked without tail-wagging, and we observed the white outer tail feathers and thin bill of a pipit. With our 30X Balscope Sr. the striped back and yellowish legs of Sprague's Pipit *(Anthus spragueii)* could easily be seen. A second bird soon appeared from behind a grass clump, then a third popped up even closer. We watched them through the scope for 15 minutes before they flew away without calling. In spite of the overcast day, even the whitish breasts with faint streaking were visible.

The similarity between Creech's Pond and the habitat in North Carolina reported by Silcock (*Chat,* 37:25) is striking. At Creech's Pond the pipits were seen near the dam in a dry area regularly frequented by Horned Larks *(Eremophila alpestris).* Savannah Sparrows *(Passerculus sandwichensis)* usually are seen nearby.

Sprague's Pipit was added to the South Carolina State List by A.T. Wayne, who collected a specimen near Mt. Pleasant in Charleston County, 24 November 1893 (*South Carolina Bird Life,* 1970, p. 421). Another was taken in the same area 17 November 1900, and a third was seen 1 November 1904. It was not until 46 years later in 1950 that the species was again seen in South Carolina in the Columbia area (*ibid,* p. 620). During the winters of 1956 and 1957, R.A. Norris collected one specimen and observed several others in the AEC Savannah River Plant area near Aiken. The species is repoted by Shuler (*South Carolina Birds of the Foothills,* 1966, p. 50) as rare in the piedmont. There are but two published records for North Carolina (*Chat,* 23:89; 37:25). The record reported here and those of recent years may indicate that Sprague's Pipit is not as rare in the Carolinas as formerly supposed.

Sharp-tailed Sparrows in Northwestern South Carolina

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12 June 1974

On 19 May 1974 I observed two Sharp-tailed Sparrows *(Ammospiza caudacuta nelsoni)* in Anderson County in northwestern South Carolina. The birds were of the Nelson's race, which nests from northwestern Minnesota to southern Northwest Territories and winters along the coast from South Carolina to Texas (Bent, *Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows, and Allies,* 1968, p. 819).

I was walking along the damp edge of a marsh about 2 miles S of Townville when a sparrow flushed from foot-high grass in front of me. I identified the bird as a Sharp-tailed Sparrow the second time it flushed from the grass, but not until it was flushed for the fourth time did it alight in a small bush. I approached the bird to within 18 feet and studied it in excellent light for 2 minutes. The bright ochre-orange color of the breast and face was easily noticed, as were the white stripes on the back, the solid dark crown, and the almost total lack of streaking on the breast and sides. A minute later and 50 yards from the first bird, I flushed a second bird from short grass along the marsh edge and into a small bush. This individual was even brighter-colored on the breast, face, and back than the first bird. Unlike the dark ear patches characteristic of the Eastern race *(A. c. caudacuta),* these birds had pale brown auriculars.

South Carolina Bird Life (Sprunt and Chamberlain, 1970) contains no inland records for the Sharp-tailed Sparrow, and a search through issues of the *Chat* and *American Birds* for the past several years failed to reveal any inland records; thus, this is apparently the first record for inland South Carolina. Sidney A. Gauthreaux and I reviewed regional bird books and *American Birds* to determine the spring status of this species in the southeastern United States, concentrating especially on inland records. The species appears to be a very rare, though a perhaps regular, migrant in the inland portions of the Southeast. It has a remarkably late migration period for a sparrow, as nearly all of the inland records fall between 15 and 25 May. Since the species regularly remains on its wintering grounds along the Gulf and southern Atlantic coasts until about 10 May, according to regional bird books, its occurrence in the inland portions of the Southeast during the latter half of May is not unexpected. Presumably the birds I saw had wintered on the southern Atlantic coast and were migrating to the northwest when they were discovered in Anderson County.

Subspecific Identification of Song Sparrows Collected at Raleigh, N.C., in Summer of 1967

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18 December 1973

On 19 July 1967, three Song Sparrows *(Melospiza melodia)* were collected along the edge of a small creek on the west side of the North Carolina State University campus in Raleigh. Gilbert S. Grant kindly prepared the skins which were then sent to the U.S. National Museum where they now bear U.S.N.M. numbers 531131, 531132, and 531133. We examined the specimens and identified them as *M. m. euphonia.* This is the race which, according to Pearson, Brimley, and Brimley (*Birds of North Carolina,* Wray and Davis 1959 Revision) and the *A.O.U. Check-list of North American Birds* (1957, fifth edition), is the breeding form in the mountains of the State. Sykes reported the Song Sparrow breeding in the Raleigh area in 1965 (*Chat,* 30:39-42) and postulated at that time that the subspecies most likely was *euphonia.*

The three identified specimens were males in worn plumage. Their testes measured 7 x 5, 7 x 6, and 8 x 6 mm. Because of the late date in the nesting season when the birds were collected and the size of the testes, evidence is not conclusive enough to determine if these individuals actually bred in the Raleigh area or were postbreeding wanderers. Additional field work is needed to clarify the breeding range expansion of the Song Sparrow into the piedmont of North Carolina.

Bird Observations After Heavy Snowfall at Wrightsville Beach, N.C.

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12 February 1974

On 9 and 10 February 1973 an intense winter storm struck the southeastern coast of the United States. Record and near-record snowfalls were recorded over much of southeastern North Carolina, eastern South Carolina, and northeastern Georgia. The temperature dropped steadily throughout 9 February at Wilmington, N.C. Snow began about 14:30, and the ground was quickly covered. The snowfall was very heavy and was being blown by strong, gusty winds. At nearby Wrightsville Beach visibility over water during the late afternoon was less than 50 yards. The snow continued through much of the night. On 10 February sleet and snow showers occurred throughout the day and into the night. The highest temperature was around freezing. The wind was blowing at a substained velocity of 20 to 30 mph and gusting to about 50 mph from the north to northwest. Offshore, gusts of approximately 80 mph were recorded at Frying Pan Light Tower. By mid-afternoon on 10 February, the snow depth reached 11.7 inches in Wilmington. Considerable drifting had occurred. The snow was covered by at least an inch of sleet, forming a very hard crust. Temperatures remained very cold through 13 February. On the night of 12-13 February, the temperature dropped to 15 F.

Considerable debris was deposited on the beach by high tides associated with the storm. Finding their normal food sources covered by sleet and snow, many birds began to search the beach debris for food. On 10 February I observed several small passerines (mostly single individuals) flying over the ocean. They would turn and struggle against the wind, trying to reach shore. I saw none of these birds reach shore. Once a medium-sized gull chased a small bird over the ocean, but it escaped. Shortly afterwards, I saw a

Ring-billed Gull *(Larus delawarensis)* eat a small passerine on the beach. The gull may have found the bird dead, as it was dead and wet when I first saw the gull with it. Savannah Sparrows *(Passerculus sandwichensis)* feeding on the beach were almost oblivious to people walking around them. They moved sluggishly and flew with great reluctance. They were unable to fly into the wind for more than a few feet.

On 11 February I saw the following birds along the southern beach at Wrightsville Beach: American Robin *(Turdus migratorius)*—1, Water Pipit *(Anthus spinoletta)*—15, Yellow-rumped Warbler *(Dendroica coronata)*—2 or 3, Red-winged Blackbird *(Agelaius phoeniceus)*—2, Savannah Sparrow—50 to 60, Ipswich Sparrow *(Passerculus sandwichensis princeps)*—2, Dark-eyed Junco *(Junco hyemalis)*—2, and Fox Sparrow *(Passerella iliaca)*—2. Most of these birds were feeding in debris along the beach. Some followed the waves like shore birds. Numbers gradually dissipated as the snow melted. A peak of three Ipswich Sparrows was found on 12 February by the author and James F. Parnell (photographs were secured).

Judging from other published reports, it is apparent that the storm triggered a heavy southward movement of birds along the coast of the Carolinas and Georgia, and that mortality was very heavy. At Wrightsville Beach, Frances Needham saw a Blue Jay *(Cyanocitta cristata)* struggle with a Yellow-rumped Warbler and fly off with it in its beak. Ted Beckett noted heavy mortality of small land birds in the Charleston area. He also observed White-throated Sparrows *(Zonotrichia albicollis)* feeding on dead members of their own species (*American Birds,* 27:601-603). Based on my observations at Wrightsville Beach, it is evident that many small land birds moving southward along the beach were displaced by the strong northwesterly winds and found themselves over the ocean. It is very likely that most of these birds perished.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates 1974)

COMMON LOON: A late inland sighting was recorded near Seneca, S.C., on 18 May by Sidney Gauthreaux.

SOOTY SHEARWATER: A flight of nearly 50 was seen moving northward close to shore off Cape Point, Hatteras Island, N.C., on the evening of 21 May by Joseph Hudick.

WILSON'S STORM-PETREL: Two were seen during a cruise 25 miles off Morehead City on 8 March by Don McCrimmon, a very early sighting for North Carolina waters.

DOUBLE-CRESTED CORMORANT: Uncommon inland visitors were seen at Lake Julian near Asheville, N.C., on 13 April by Roland Sargent, and at Lake Hartwell near Clemson, S.C., on 11 May by Harry LeGrand. One was also found at Whispering Pines, N.C., 15 and 16 April, and another at Lake Surf near Vass, N.C., on 5 May, both observed by Jay Carter.

EUROPEAN WIGEON: A male was seen at Pea Island N.W.R. on 14 April by Ricky Davis.

COMMON EIDER: An individual in female plumage was seen in the surf off Carolina Beach, N.C., on 15 April by Ricky Davis.

HOODED MERGANSER: A rare nesting attempt was recorded in Granville County, N.C., where a pair was flushed from a Wood Duck box on 3 April by Paul A. Stewart. On a later check, 20 April, the box containing a nest with eight eggs was found abandoned.

SWALLOW-TAILED KITE: Two were observed 11 May in the Mills River Valley near Hendersonville, N.C., by Scott Hall (CBC field trip). Elsewhere the presence of this species was again noted in the Buxton-Frisco-Pea Island area on the N.C. Outer Banks where several sightings were recorded from 18 May through 3 June by Paul Buckley, Edward Burroughs, and Joseph Hudick.

MARSH HAWK: One was seen near the Fort Macon Coast Guard Station, Bogue Banks, N.C., on 26 May by Robert Hader, an unusual record for late May.

BLACK RAIL: A roadside census through Cedar Island N.W.R., Carteret County, N.C., on the night of 23-24 May yielded a count of 74 calling birds, John Fussell and Don McCrimmon.

COMMON GALLINULE: Locally rare spring occurrences were noted inland at Raleigh, N.C., where an individual was found by Gail Whitehurst during the first week of May, and at Bethania, N.C., near Winston-Salem where one was seen on 6 May by Paul Spain.

BLACK-BELLIED PLOVER: A noteworthy non-coastal sighting of six was recorded at Gaston, N.C., on 8 May by Merrill Lynch. The birds were found at mudflats created by construction work at the Albemarle Paper Company's water treatment plant.

PECTORAL SANDPIPER: A flock of 55, an unusually high inland count for spring migration, was seen by Merrill Lynch at the above-mentioned Albemarle mudflats, Gaston, N.C., on 29 April.

UPLAND SANDPIPER: A small flock of four were uncommon spring visitors at Raleigh, N.C., 16-23 April, initially seen by Thomas Quay's ornithology class. Elsewhere one was also seen at Durham, N.C., on 23 April by Carlie and Robin Carter, and another at Havelock, N.C., on 10 May, fide John Fussell.

WHITE-RUMPED SANDPIPER: Two were seen 9 May at Gaston, N.C., by Merrill Lynch and one on 18 May near Raleigh, N.C., by Ken Knapp *et al.* Another was seen in the Winston-Salem area in early May, fide Ramona Snavely.

STILT SANDPIPER: Five were found near Durham, N.C., on 3 April by Robin Carter, a rare local spring occurrence.

LEAST SANDPIPER: A large flock of over 200 was seen 9 May at Gaston, N.C., by Merrill Lynch.

BLACK-NECKED STILT: A good count of 38 was recorded on the Outer Banks at Pea Island N.W.R. on 14 April by Gilbert Grant.

PARASITIC JAEGER: One was seen at Cape Point, Hatteras Island, N.C., on 19 May by Joseph Hudick.

LAUGHING GULL: An inland visitor was sighted at Lake Hartwell near Clemson, S.C., on 28 April by Harry LeGrand and another there on 2 May by Sidney Gauthreaux, rare first spring records for that western piedmont reservoir.

BONAPARTE'S GULL: Migrants were conspicuous at several inland locations this spring, highlighted by reports of about 150 at Lake Julian on 30 March (Scott Hall) and 50 to 75 on the French Broad River 5 April (Robert Ruiz) in the Asheville, N.C., area. Up to 40 were seen at Raleigh, N.C., by David Whitehurst on 2 April. Smaller numbers were seen at Lake Hartwell, Clemson, S.C., where 15 were recorded on 26 March by Sidney Gauthreaux and 2 on 12 May by Harry LeGrand.

FORSTER'S TERN: Twelve were seen at Lake Hartwell near Clemson, S.C., on 5 May by Harry LeGrand and Sidney Gauthreaux.

COMMON TERN: Thomas Quay observed an inland visitor at Raleigh, N.C., on 18 April, and two were seen at Lake Surf near Vass, N.C., on 5 May by Jay Carter.

CASPIAN TERN: Uncommon inland sightings were recorded at several locations during April and early May:

Number Seen	Date	Location	Observers
1	13 April	Lake Hartwell near Clemson, S.C.	Harry LeGrand and Sidney Gauthreaux
2	19 April	Lake Surf near Vass, N.C.	Jay Carter
1	28 April	Lake Surf	Merrill Lynch and Edmund LeGrand
1	29 April	Gaston, N.C.	Merrill Lynch
5	9 May	Gaston, N.C.	Merrill Lynch

CHUCK-WILL'S-WIDOW: Two transient visitors were briefly present in the Durham, N.C., area in late April and early May west of the species' usual range, Robin Carter and Russell Hoverman.

WHIP-POOR-WILL: One was very early in Raleigh, N.C., heard calling on 2 March by Jean Halsey.

YELLOW-BELLIED SAPSUCKER: A rather late winter straggler was seen near Morehead City, N.C., on 8 May by Judy Eubanks, fide John Fussell.

YELLOW-BELLIED FLYCATCHER: A transient was seen and heard 24 May near Eden, N.C., by Carol and Edward Burroughs, and another 25 May along the Neuse River in northern Wake County, N.C., by John Wright.

ALDER FLYCATCHER: Single transients were noted 15 May at North Wilkesboro, N.C., by Wendell Smith and 22 May at Raleigh by Chris Marsh. Both birds were identified by their distinctive "fee-be-o" song.

WILLOW FLYCATCHER: One was closely observed and heard singing on 21 May near Marietta in northern Greenville County, S.C., by Harry LeGrand. The bird appeared to be on territory but no direct evidence of nesting was found.

BANK SWALLOW: Over 100 migrants were seen feeding over Lake Surf near Vass, N.C., on 5 May by Jay Carter.

BARN SWALLOW: Six were early arrivals at Clemson, S.C., on 22 March, observed by Sidney Gauthreaux.

WATER PIPIT: A few winter lingerers were still present as late as 3 May at Charleston, S.C. (Perry Nugent) and 5 May in the Southern Pines, N.C., vicinity (Jay Carter).

FISH CROW: Two were observed and heard calling 16 May at Clemson, S.C., by Harry LeGrand, further confirming the presence of a small population at that western piedmont location following last year's first record there (*Chat*, 37:88).

SHORT-BILLED MARSH WREN: One was found inland at Raleigh, N.C., 17 April by David Whitehurst.

SWAINSON'S THRUSH: On the coast a locally rare spring transient was seen 10 May near Atlantic Beach, N.C., by John Fussell.

PROTHONOTARY WARBLER: A locally rare occurrence for the mountain area was recorded 28 April at Lake Julian near Asheville, N.C., where a male was seen and photographed by Thomas Enright, fide Robert Ruiz.

BLUE-WINGED WARBLER: A sighting east of this species' normal spring migration route was recorded at Lake Mattamuskeet, Hyde County, N.C., where an individual was seen 14 April by Ricky Davis.

TENNESSEE WARBLER: Migrants were recorded east of the mountains with unusual frequency this spring. Several were seen in the Winston-Salem area in late April and early May (fide Ramona Snavely), and seven sightings were reported in the Chapel Hill, N.C., vicinity (fide James Pullman) where only a few spring occurrences have been recorded in the past 10 years. One was also seen at Raleigh, 20 April (Ken Knapp), and there was a coastal sighting at Charleston, 28 April (Perry Nugent).

ORANGE-CROWNED WARBLER: One was noted as an uncommon spring transient at Raleigh, N.C., 2 March by James Mulholland, fide Robert Hader. Individuals were seen elsewhere in the piedmont at Townville, S.C., 13 April by Sidney Gauthreaux, and at Zebulon, N.C., on 13 May by Ricky Davis.

NASHVILLE WARBLER: A 6 May sighting was recorded in Caswell County, N.C., by Fenton Day and Plumer Wiseman.

CAPE MAY WARBLER: A coastal migrant was seen at Fort Macon near Atlantic Beach, N.C., on 18 May by Robert Hader, an uncommon spring record for that locality.

BLACK-THROATED BLUE WARBLER: One was a rare coastal spring visitor on Bogue Banks at Salter Path, N.C., 13 April, observed by William Lisowski, fide John Fussell.

BLACKBURNIAN WARBLER: Locally uncommon spring sightings were recorded at Raleigh, N.C., where single birds were observed on 21 April by David Whitehurst and 23 May by Gail Whitehurst.

NORTHERN WATERTHRUSH: Coastal occurrences were noted on Bogue Banks, N.C., where individuals were seen in the Pine Knoll Shores vicinity on 21 April and 16 May by John Fussell.

CANADA WARBLER: A late transient was found at Chapel Hill, N.C., on 27 May by James Pullman and Robert Teulings.

BOBOLINK: A late spring migrant was seen on the coast near Atlantic Beach, N.C., 31 May by John Fussell and Robert Teulings.

NORTHERN (BALTIMORE) ORIOLE: A nesting pair was found 11 May at Winston-Salem by Barbara Page. The nest was photographed, documenting the second local breeding record since 1972 (see *Chat*, 36:115).

DICKCISSEL: Single birds were visitors at feeders at Pawley's Island, S.C., 27 April (F.M. Probst) and at Raleigh, N.C., 29 April (fide T.L. Quay).

WHITE-THROATED SPARROW: Two late stragglers were seen at Umstead State Park near Raleigh, N.C., on 27 May by Nelson Chadwick.

Carolina Bird Club
INC.

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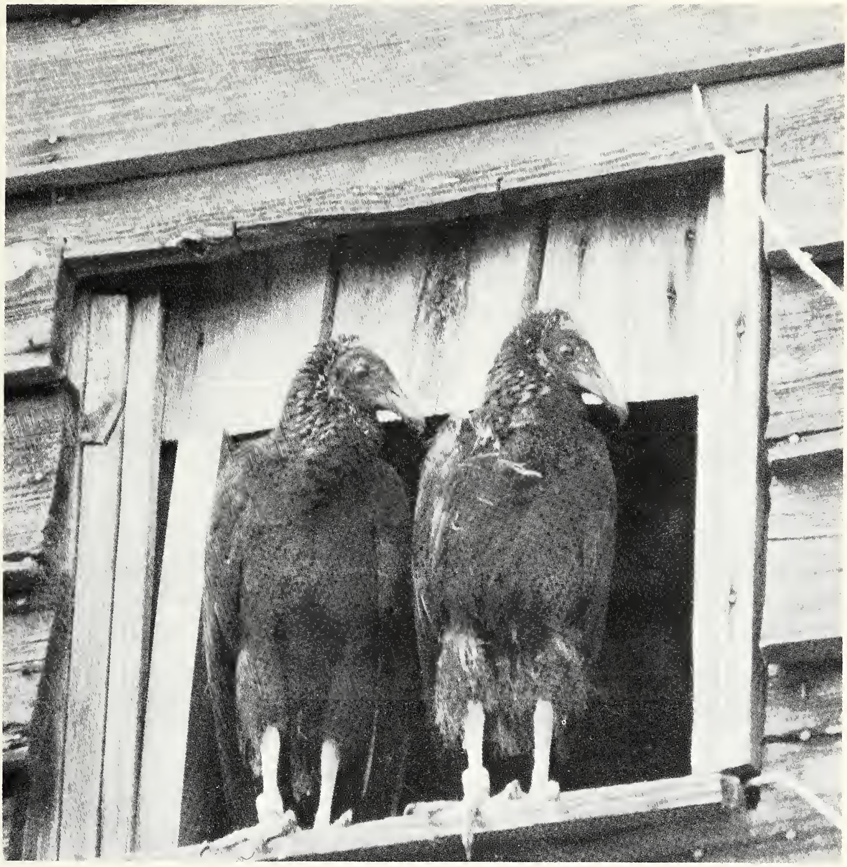

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OUR COVER—Two young Black Vultures were photographed by Paul A. Stewart, whose paper on the nesting habits of this species appears in the July 1974 *Auk*. The Barn Owl drawing by John Henry Dick (page 90) is reprinted by popular request. It was cropped slightly when it appeared on our cover in September 1970.

LATE SPRING ALONG THE SOUTHERN BLUE RIDGE PARKWAY—1973

JAMES TATE JR. and CHARLES R. SMITH

The authors, in company with D. Jean Tate, Brant Tate, Georgina Furlong and Saba von Sturzbach, conducted field studies in parts of western North Carolina from 21 through 25 May 1973. Our observations were made primarily along the Blue Ridge Parkway as it passes through the counties of Swain, Jackson, Haywood, Transylvania, Henderson, Buncombe, and Yancey between the Great Smoky Mountains National Park (GSMNP) and Mount Mitchell State Park. We spent 25 May on Roan Mountain in Mitchell County. For details of the geographic features of this area, the reader might refer to "Topographic Map, Blue Ridge Parkway, Virginia and North Carolina (South Section)," prepared by the United States Department of the Interior.

In the present paper, the names of birds are those found in the *A. O. U. Check-list* (1957) and its Thirty-second Supplement (1973). Botanical names follow Radford, Ahles, and Bell (1968).

At this season (late May) there were prominent altitudinal differences in the stages of development of many plant species. As altitude increased and exposure worsened, most deciduous species showed retarded foliage development. At 3,000 feet the lowland pine-oak association became less common, being replaced with a mostly deciduous hardwood association of maples, oaks, beech, and some yellow birch *(Betula lutea).* Localities visited at these lower altitudes were seasonally well advanced. American Robins, Eastern Phoebes, and Red-eyed Vireos had nests with eggs. Foliage was well developed, and in many cases flowering had passed.

Rhododendrons and tulip tree *(Liriodendron tulipifera)* continued up the slope with rhododendron extending to the tops of some of the highest peaks visited. At about 4,500 feet the hardwood association incorporated eastern hemlocks *(Tsuga canadensis)* in the wet coves. At these elevations the hemlocks were dropping pollen. By 5,000 feet a distinct break in the vegetation was found. Foliage development had progressed little above this point. There was limited flowering among the understory shrubs (serviceberry—*Amelanchier arborea* var. *laevis*, blueberries—*Vaccinium* sp., and mountain winterberry—*Ilex ambigua* var. *montana).* Larger shrubs (redbud—*Cercis canadensis*, fire cherry—*Prunus pensylvanica)* were flowering in abundance from 4,500 feet to 5,000 but did not show swelling buds above 5,000 feet. The association of hardwoods was composed of well-developed large trees between 4,500 feet and 5,000 feet. They contained much dead wood and held avifaunas consisting of winter residents, permanent residents, and a few hardy new arrivals.

Abruptly the plant life above 5,000 feet changed to high altitude forest with stunted yellow birches and beeches, a few northern conifers, and vegetated balds. These areas were still in the grip of late winter. There were only a few herbs showing signs of vegetation or bloom, shrubs were not showing bud swelling, and trees were dormant. The avifauna was composed of winter and permanent residents with a few of the early migrants. Ice and snow were not gone, but just being forgotten.

BIRD CHECKLIST

The following is a briefly annotated list of 53 species observed during the course of our work in western North Carolina.

Turkey Vulture *(Carthartes aura)*—One bird seen near Parkway Mile 462 (4,500 feet), Swain County, 22 May.

Red-tailed Hawk *(Buteo jamaicensis)*—One bird seen on the Parkway 2.7 miles S from the Mt. Pisgah Campground, Transylvania County, 22 May.

American Woodcock *(Philohela minor)*—Flight-songs of this species were heard at Mt. Pisgah Campground (4,900 feet), Haywood County, on 22 May and on Roan Mountain at Carver's Gap (5,512 feet), Mitchell County, on 25 May. Simpson (1968, 1971) summarized the occurrence of this species in western North Carolina and reported it from both of those areas. Final evidence to prove the regular nesting of this species at these altitudes must await the discovery of eggs or young (see Simpson, 1968:38). The further observation of this bird in 1973, 10 years after Stupka's report (1963) and 5 years after Simpson's first report (1968), reduces the likelihood that the population represents any longer a recent influx of males due to habitat changes as suggested by Simpson (1968:38). All of our observations of singing males were in habitat other than the highway right-of-way Simpson regarded as responsible for their presence.

Great Horned Owl *(Bubo virginianus)*—One bird flew across the Parkway approximately 1 mile S of Craggy Gardens, Buncombe County, at 18:00 EDT on 23 May.

Barred Owl *(Strix varia)*—One bird heard calling from near Parkway Mile 455, Swain County, at 13:00 EDT on 22 May.

Chimney Swift *(Chaetura pelagica)*—Five at Waterrock Knob (6,000 feet), Jackson County, 21 May and Craggy Gardens (5,300 feet), Buncombe County, 23 May.

Ruby-throated Hummingbird *(Archilochus colubris)*—One bird observed feeding from a dandelion *(Taraxacum officinale)* at junction of spur road to Heintooga Overlook and Blue Ridge Parkway (4,800 feet), Jackson County, on 21 May.

Common Flicker *(Colaptes auratus)*—Seen or heard at several locations along the Parkway, but never above 4,900 feet.

Yellow-bellied Sapsucker *(Sphyrapicus varius)*—Collected a breeding pair at Parkway Mile 455 (4,800 feet), Jackson County, on 21 May. Breeding status was determined by the presence of a shell-covered egg in the oviduct of the female. The habitat occupied by the birds was deciduous broadleaf forest with Eastern Hemlock *(Tsuga canadensis)* on the wetter sites (Figure 1). Cairns (1889) reported this species as "common amongst the heavy timber" of Buncombe County and as a breeding bird in April in that county. Simpson (1972) reported the nesting of this species in several places in the mountains of western North Carolina. Curiously, none of the sites along the Parkway reported by Simpson was occupied by sapsuckers in late May. All of Simpson's localities are at higher elevations which were not occupied by summer residents at the dates of our list.

Downy Woodpecker *(Dendrocopos pubescens)*—Seen and heard at several locations along the Parkway. Because there was the call of a Downy Woodpecker superimposed on the prerecorded tape we used to find sapsuckers, Downy Woodpeckers were seen at every locality that we searched for sapsuckers, including at 5,800 feet at Craggy Gardens.

Hairy Woodpecker *(Dendrocopos villosus)*—Seen or heard at several locations along the Parkway. We listed five of these birds on a walk from Craggy Gardens to the Beetree Gap Picnic Area and back via the Parkway, Buncombe County, on 23 May.

Acadian Flycatcher *(Empidonax virescens)*—Only at the south end of Tanbark Tunnel (3,500 feet), 10.1 miles S of Craggy Gardens, Buncombe County, 24 May.

Eastern Wood Pewee *(Contopus virens)*—One bird at Parkway Mile 460 (4,700 feet), Jackson County, 22 May.

Tree Swallow *(Iridoprocne bicolor)*—Two birds at Craggy Gardens (5,300 feet), Buncombe County, 24 May. C.S. Brimley (in Pearson, Brimley, and Brimley, 1942) lists a late spring departure date of 30 May 1886, for this species at Raleigh, and Stupka (1963) lists no spring dates after 30 April for the Great Smoky Mountains National Park. This species is absent from the Mt. Mitchell list of Simpson (1972).

Rough-winged Swallow *(Stelgidopteryx ruficollis)*—Three at Waterrock Knob (6,000 feet), Jackson County, 21 May and Craggy Gardens (5,300 feet), Buncombe County, 23 May.

Barn Swallow *(Hirundo rustica)*—Several at Roan Mountain (6,000 feet), Mitchell County, 25 May.

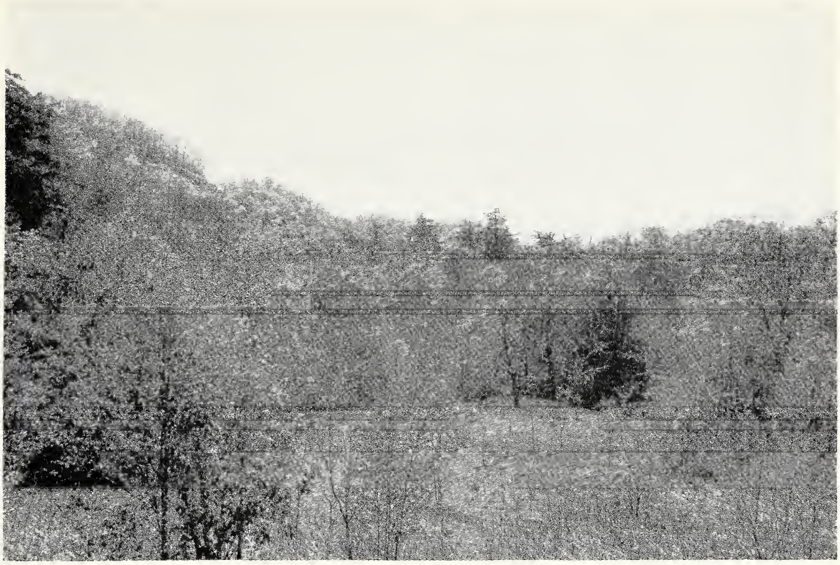

Figure 1. Nesting habitat of a pair of Yellow-bellied Sapsuckers at the upper edge of the newly leafed-out broadleaf forest looking NNW at Parkway Mile 455, Jackson County, N.C., 21 May 1973.

Blue Jay *(Cyanocitta cristata)*—Seen or heard at several locations along the Parkway, never above 5,000 feet.

Common Raven *(Corvus corax)*—Three at Craggy Gardens (5,300 feet), Buncombe County, 23 May and one on Roan Mountain (6,000 feet), Mitchell County, 25 May.

Carolina Chickadee *(Parus carolinensis)*—Seen or heard at several locations along the Parkway, but not above 3,400 feet. No Black-capped Chickadees were found during this trip.

Tufted Titmouse *(Parus bicolor)*—Seen or heard at several locations along the Parkway, but never above 3,500 feet.

Red-breasted Nuthatch *(Sitta canadensis)*—Parkway Mile 450, Jackson County (5,300 feet), 21 May and Roan Mountain (6,00 feet), Mitchell County, 25 May.

Brown Creeper *(Certhia familiaris)*—Seen and heard at Parkway Mile 450 (5,300 feet), Jackson County, 21 May.

Winter Wren *(Troglodytes troglodytes)*—Two heard at Craggy Gardens (5,300 feet), Buncombe County, 23 May.

Carolina Wren *(Thryothorus ludovicianus)*—Several heard at Mingus Mill, GSMNP (2,500 feet), Swain County, 22 May and Big Cove (2,000 feet), Haywood County, 21 May.

Gray Catbird *(Dumetella carolinensis)*—Seen or heard at several locations along the Parkway, including the highest elevations visited.

Brown Thrasher *(Toxostoma rufum)*—Mt. Pisgah Campground (4,900 feet), Haywood County, 23 May.

American Robin *(Turdus migratorius)*—Very numerous along most of the Parkway; nest with four eggs 10 feet up in a shadbush *(Amelanchier arborea* var. *laevis)* near Parkway Mile 462 (4,500 feet), Swain County, 22 May and nest with one day-old young and two eggs 12 feet up in a red spruce *(Picea rubens)* at Mt. Pisgah Campground (4,900 feet), Haywood County, 23 May.

Veery *(Catharus fuscescens)*—Seen and heard at several locations along the Parkway, including sites as low as 3,300 feet.

Blue-gray Gnatcatcher *(Polioptila caerulea)*—One heard near Parkway Mile 454 (4,600 feet), Jackson County, 21 May.

Golden-crowned Kinglet *(Regulus satrapa)*—Seen and heard at higher elevations along the Parkway and on Roan Mountain, Mitchell County.

Starling *(Sturnus vulgaris)*—Several seen at Oconaluftee Visitors' Center (2,000 feet), GSMNP, Swain County, 21 May and Balsam Gap (3,370 feet), Jackson County, 22 May.

Solitary Vireo *(Vireo solitarius)*—Seen and heard at several locations along the Parkway. We listed eight singing birds on a walk from Craggy Gardens to the Beetree Gap Picnic Area and back via the Parkway, Buncombe County, on 23 May.

Red-eyed Vireo *(Vireo olivaceus)*—Seen and heard at several locations along the Parkway, up to as high as 5,100 feet. It is interesting to note that Simpson (1972) reports this species only as a rare fall transient from the Mt. Mitchell area.

Black-and-white Warbler *(Mniotilta varia)*—Seen and heard at several locations along the Parkway, but not above 5,100 feet.

Northern Parula *(Parula americana)*—One only at Smokemont Campground (2,300 feet), GSMNP, Swain County, 22 May.

Black-throated Blue Warbler *(Dendroica caerulescens)*—Seen and heard at several locations along the Parkway. We listed six singing males of this species on a walk from Craggy Gardens to the Beetree Gap Picnic Area and back via the Parkway, Buncombe County, 23 May.

Black-throated Green Warbler *(Dendroica virens)*—Seen and heard at several locations along the Parkway, but not above 5,200 feet.

Chestnut-sided Warbler *(Dendroica pensylvanica)*—Seen and heard at several locations along the Parkway. Nest under construction in a blueberry *(Vaccinium vacillans)* at Mt. Pisgah Campground (4,900 feet), Haywood County, 23 May.

Ovenbird *(Seiurus aurocapillus)*—Seen and heard at several locations along the Parkway, up to as high as 6,000 feet at Waterrock Knob.

Louisiana Waterthrush *(Seiurus motacilla)*—One only at Mingus Mill (2,500 feet), GSMNP, Swain County, 22 May.

Canada Warbler *(Wilsonia canadensis)*—Two pairs of birds seen apparently on territory and searching for nesting sites about 1 mile S of Craggy Gardens along the Parkway (5,000 feet), Buncombe County, 23 May.

House Sparrow *(Passer domesticus)*—Several seen, only at Oconaluftee Visitors' Center (2,000 feet), GSMNP, Swain County, 21 May.

Scarlet Tanager *(Piranga olivacea)*—Seen or heard at several locations along the Parkway.

Rose-breasted Grosbeak *(Pheucticus ludovicianus)*—Seen or heard at several locations along the Parkway. On 22 May, we watched a male feeding on buds of the silverbell *(Halesia carolina)*.

Indigo Bunting *(Passerina cyanea)*—Only at Mingus Mill (2,500 feet), GSMNP, Swain County, 22 May.

Pine Siskin *(Spinus pinus)*—A single bird was seen and heard on two occasions on 25 May at 6,000 feet on Roan Mountain, Mitchell County.

American Goldfinch *(Spinus tristis)*—Several flocks of as many as 50 birds of both sexes were seen along parts of the Parkway, often at elevations of 5,000 feet or more.

Red Crossbill *(Loxia curvirostra)*—Two birds were seen and heard on two occasions at 5,800 feet on Roan Mountain, Mitchell County, on 25 May.

Rufous-sided Towhee *(Pipilo erythropthalmus)*—Seen and heard at several locations along the Parkway, but not above 5,000 feet.

Dark-eyed Junco *(Junco hyemalis)*—This species and the American Robin were easily the most abundant birds along the Parkway. We found a nest with four eggs on a roadside bank beneath trailing arbutus *(Epigea repens)* near Parkway Mile 462 (4,500 feet), Swain County, 22 May. On a walk from Craggy Gardens to the Beetree Gap Picnic Area and back via the Parkway, Buncombe County, we estimated 40 to 50 of this species were seen or heard on 23 May.

Chipping Sparrow *(Spizella passerina)*—One heard only near Parkway Mile 455, Jackson County, 21 May.

Field Sparrow *(Spizella pusilla)*—Two birds heard only at Balsam Gap (3,370 feet) on the Parkway, Jackson County, 22 May.

Song Sparrow *(Melospiza melodia)*—Two birds heard at Waterrock Knob (6,000 feet), Jackson County, 21 May.

We were interested to note the great abundance of American Robins, both the breeding birds at the middle elevations and the flocks of migrants at the higher elevations. It also struck us as unusual that once we were above 4,000 feet, we did not see any Icteridae—neither a blackbird, meadowlark, oriole, grackle, nor cowbird. Simpson (1972) notes only the Eastern Meadowlark among the Icteridae from Mt. Mitchell. Also, unrecorded and worthy of note were ducks and geese. Broad-winged Hawk, falcons, Ruffed Grouse, Bobwhite, Mourning Dove, caprimulgids (nightjars), Common Crow, waxwings, and shrikes. The early dates of our visit might account for some of these omissions.

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CBC Roundtable

... with Louis C. Fink

Bird Behavior

During the summer, we keep our feeder filled with stale bread. The birds like the "plastic" breads rather than home-made or good Pepperidge Farms bread, and will not touch rye bread. We have the impression that males of the Red-bellied Woodpecker take over the entire responsibility for feeding the young when the young are first able to leave the nest. Ours is feeding three young, two males and one female, who can fly to the feeder and feed themselves if the parent male is occupied with one of the others. The female is around, but we do not observe her caring for the young.

Another observation which interests us is the Common Grackle which prefers to dip his bread in the water bath before eating it. Once—when we had taken a large chunk—he carefully waded to the center of the bath and deposited the bread there. Then he took small pieces to the edge, ate them, and returned for seconds. Any other bird who tries to interrupt this delicate dining is summarily chased off.

Do we have uniquely behaving birds, or are these two patterns normal?—MRS. BRUCE NICKLAS, 3101 Camelot Court, Durham, N.C. 27705.

Note: Arthur A. Allen wrote in *The Book of Birds* (National Geographic Society, Washington, D.C., 1932), speaking of grackles, "Each March, however, we were glad to have the 'blackbirds' come back and we watched them carry dry crusts to the water and soak them before trying to eat them."

"The Specimen Was Collected"

C.E. Pinckard, a member of the Carolina Bird Club, calls our attention to The Pan-American Society for the Protection of Birds, P.O. Box 3681, Baltimore, Md. 21214. "If you are angered by the above phrase," he says, "you will be interested in the recently formed Society."

The Society was formed to protect birds from the dangers caused by man. "The Society is aware that many people are concerned about the many abuses perpetrated by the bird-collectors, particularly where birds are killed solely for the purpose of documenting the record of an extralimital vagrant."

This column will be interested in comments from our members with collecting licenses.

Bird-finding in the Carolinas

Medoc Mountain.—This acreage has been bought for a North Carolina State Park, and has not been "developed." I made my visit on 10 September, and I cannot recommend it for its abundance of bird life. Mockingbirds, Blue Jays, and Carolina Wrens were all I found in an hour's walk—but the walk itself was sheer delight . . . along a grown-over auto track, down hill to a stream, a steep climb back up through a second-growth stand of mixed hardwoods and a few pines. No sound of truck or plane disturbed the silence, and the only evidence of man was the trash. (The Great Swamp Refuge in New Jersey deliberately left trash along its trails, pointing out that "man is the only animal whose waste is a permanent blot on the landscape.")

To reach Medoc Mountain drive north on US 301 and I-95 from Rocky Mount to NC 48 and North on 48 to Gold Rock and Ringwood. Three miles past Ringwood, turn left on 1002, a paved road. One mile to the west is a fire tower. Turn in (right) and go 3/4 of a mile on a gravel road. (Or walk in and enjoy it.) The approach ride produced an abundance of Bobwhite, Eastern Meadowlarks, Mourning Doves, Sparrow Hawks, Eastern Bluebirds, and five Turkey Vultures over Medoc itself.

Lake Erie Birding

In late September, I had the good fortune to be in Cleveland and to look for birds with Mr. and Mrs. Carl Newhous (CBC members who send regards to friends in the Wilmington area). It became a joke that we could not find a Downy Woodpecker or Tufted Titmouse, but we counted eight Red-breasted Nuthatches, 50 Common Flickers, and untold warblers. My count for the weekend was 77 species.

Hawk Migration Association

The Hawk Migration Association of North America has been established to increase communication among hawk watchers, to standardize the data on hawks, and to improve coverage of hawk migrations. What happens after the birds leave such spots as Hawk Mountain? Carolina bird students are asked to establish lookouts on hills, along rivers, or on the coast.

Individual dues are $5 a year. Send to Dorothy Crumb, 3983 Gates Road North, Jamesville, N.Y. 13078. Regional editor is Robert Kennedy, Museum of Zoology, Louisiana State University, Baton Rouge, La. 70803. Write him for details.

Our Writers

We know many bird students who disdain to keep notes, and others who dislike to join clubs and share their knowledge with friends. Fortunately, the Carolinas have produced a number of careful observers who are willing to set down their findings, so that others may benefit.

For years, Robert P. Teulings has prepared the exhaustive report on the Southern Atlantic Coast Region for *American Birds*, a monumental source of information and yes, diversion.

In the August 1974 issue of *American Birds*, a most interesting section called “The Changing Seasons” was prepared by Sidney A. Gauthreaux Jr. and Harry E. LeGrand Jr. of the Department of Zoology, Clemson University.

Probably the most prestigious of all is *The Auk*, journal of the American Ornithologists’ Union. In the issue of July 1974, there appears a brilliantly detailed technical article, “Relationship of Anting and Sunbathing to Molting in Wild Birds.” It was prepared by Eloise F. Potter and the late Doris C. Hauser.

I am not competent to review this work critically. The magazines have exacting standards, and you’ll be rewarded by reading all of the material mentioned.

Eastern Wilderness

Nineteen wilderness areas have been approved by the U.S. Senate, but need endorsement in the House of Representatives from specific Congressmen. Of interest to CBC is Pocosin, N.C., 17,000 acres, in the district represented by Congressman W.B. Jones.

New Address

Eloise F. Potter has a new mailing address: Route 3, Box 114 AA, Zebulon, N.C. 27597. The location of her home and her telephone number remain the same.

Bird Count Compilers Please Note: Correction in Definition of Count Period

Last minute revisions in the "New Policies Concerning the Spring and Christmas Bird Counts" (*Chat*, 38:53-55) resulted in an unfortunate error in the definition of "count period." Carolina Bird Club will continue to use the Christmas Bird Count dates adopted by *American Birds*. The period during which species may be reported with an asterisk as having been seen in the count circle during the count period but not on the count day will be the 3 days before and the 3 days after the actual count day. Carolina Bird Club dates for Spring Bird Counts will be 16 April through 15 May, and the local count period will be the 7 days before and the 7 days after the actual count day. Thus a Christmas Bird Count taken on 30 December would have a count period of 27 December through 2 January. A Spring Bird Count taken on 20 April would have a count period of 13 April through 27 April. The Editor regrets any confusion that may be caused by her carelessness and apologizes to Harry E. LeGrand Jr., who was in no way responsible for the erroneous statements.—ED.

General Field Notes

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Bird Observations at Lake Surf, Moore County, N.C.

J.H. CARTER III
P.O. Box 891, Southern Pines, N.C. 12 April 1974

Lake Surf is a new development in east-central Moore County, N.C. It is centered around a 1,130-acre lake, near the small rural community of Lobelia. The lake was constructed in a natural basin containing Crain's Creek. The lake basin was ready to begin filling in September 1973, but a drought during the fall allowed little filling to take place. The lake did not fill completely until early in 1974.

Two large dikes extend toward the center of the lake, and part of a golf course has been constructed at the rear of the lake. The fairways and greens are virtually surrounded by water contained in channels and coves. During the fall of 1973, the lake bed and channels contained extensive mudflats, pools, and brush thickets as well as large areas covered with grasses and sedges. The golf course area was open except for some small cultivated trees and shrubs.

In late August 1973, my father played golf at Lake Surf, and reported seeing a large number of shorebirds. I visited the area on 30 August, and found six species of shorebirds. I continued to check the area regularly through December. Several other observers also visited Lake Surf, and some of their records will be cited below. The very large expanse of mud and water made accurate counts of some species difficult or impossible to obtain. It should be noted that the shorebird migration begins in this area in mid-July, so the early migrants were missed.

Following is a list of the shorebirds and unusual land birds found at Lake Surf during the fall and early winter of 1973. Records are those of the author (JHC) unless otherwise indicated. Other observers were Dana Carter (DC), John Fussell (JF), Robert Hader (RH), Edmund LeGrand (EL), Harry LeGrand (HL), Merrill Lynch (ML), Chris Marsh (CM), Darryl Moffett (DM), Ted Nixon (TN), Barbara Roth (BR), Elizabeth Teulings (ET), Robert Teulings (RT), and John Wright (JW). Several noteworthy records obtained at Lake Surf on the Southern Pines Christmas Count (SPCC) on 21 December are included in the list.

American Bittern (*Botaurus lentiginosus*): One was recorded on 17 and 21 November, and 21 December (JF, CM; SPCC). This species is rare in the Sandhills in fall, and the December record is the first winter record for the area (Carter, 1971).

Canada Goose (*Branta canadensis*): Four were seen on 2 December, and 14 were seen on 21 December (JF; SPCC). This species is rare in the Sandhills area in winter (Ibid.).

Blue-winged Teal (*Anas discors*): One was recorded on 21 December (CM; SPCC). This is the only winter record I know of since Skinner (1928) stated that this species is found in the Sandhills all winter.

Northern Shoveler (*Anas clypeata*): One was recorded on 21 December (CM; SPCC). This species is considered a rare winter visitor in this area (Carter, 1971).

Sora (*Porzana carolina*): One was flushed at close range on 21 December (JF; SPCC). First winter record for area.

Semipalmated Plover (*Charadrius semipalmatus*): Present 30 August (3 individuals) through 15 September (1 individual). Peak number: 3 on 30 August. This species is a very uncommon fall transient in this area (Ibid.).

Killdeer (*Charadrius vociferus*): Present 30 August (approx. 27) through 23 December (3). Peak number: approx. 27 on 30 August.

American Golden Plover (*Pluvialis dominica*): Three were seen on 30 September (TN, BR), 6 on 3 October, and 7 on 10 October. These birds usually were found on the golf course. First fall records for area.

Black-bellied Plover (*Squatarola squatarola*): Present 15 September (1) through 24 October (2). Peak number: 2 on 17 and 24 October. This species also frequented the golf course. First records for area.

Common Snipe (*Capella gallinago*): Present 11 September (1) through 2 December (1-2) and probably later. Peak number: 4 on 14 September. This species was much scarcer than expected, but probably was overlooked.

Spotted Sandpiper (*Actitis macularia*): Present 9 September (2) through 24 September (1, HL). Peak number: 4-5 on 22 September. This species was also surprisingly scarce, but since it does not travel in large flocks, it was probably overlooked.

Solitary Sandpiper (*Tringa solitaria*): Present 9 September (1) through 22 September (1). Peak number: 3 on 11 and 15 September. See comment under preceding species.

Greater Yellowlegs (*Totanus melanoleucus*): One was recorded on 30 August, 10 October, and 24 October.

Lesser Yellowlegs (*Totanus flavipes*): Present 30 August (1) through 3 October (1). Peak number: 2 on 14 and 15 September.

Pectoral Sandpiper (*Calidris melanotos*): Present 30 August (3) through 2 December (1). Peak number: approx. 65 on 19 September. The December record is very late. The high numbers present from mid- to late September (30 to 65 individuals) are unprecedented in this area in fall (Ibid.). These birds usually were found feeding on the golf course.

Baird's Sandpiper (*Calidris bairdii*): Present 9 September (2) through 19 September (3). Peak number: 3 on 11, 14, 15, and 19 September (DC, JHC, JF, RH, ML, CM). First records for area. This species is very rare in North Carolina, and there is only one published record from the inland portion of the state. One was collected at Swannanoa on 1 September 1930 (Pearson, Brimley, and Brimley, 1959).

Least Sandpiper (*Calidris minutilla*): Present 30 August (1) through 21 November (2, HL). Peak number: 10+ on 11 September. The two birds on 21 November were quite late.

Semipalmated Sandpiper (*Calidris pusillus*): One was recorded on 9 and 10 September and 10 October, and 2 were seen on 11 September.

Stilt Sandpiper (*Micropalama himantopus*): One was recorded on 9, 10, and 15 September, and 2 were seen on 11 September. Only previous record for area is one at Thurlow's Lake on 9 October 1961 (Carter, 1971).

Buff-breasted Sandpiper (*Tryngites subruficollis*): Present 10 September (6) through 24 September (4, HL). Peak number: 11 on 14 and 15 September. This species was formerly considered very rare in North Carolina, but in recent years it has been found regularly along the Outer Banks in fall (*American Birds* and *Chat*). Inland records are still very rare, and numbers as high as those listed above are unprecedented in inland North Carolina. These birds represent the first records for this area. They usually were found feeding on the golf course.

Flicker hybrid (*Colaptes a. auratus* x *a. cafer*): One was recorded on 21 November (EL, CM, JW). It had reddish wing linings and the head markings of a Yellow-shafted Flicker.

Horned Lark (*Eremophila alpestris*): A high count of 32 was recorded on 21 December (JF, CM; SPCC).

Bewick's Wren (*Thryomanes bewickii*): One was seen on 21 September and 2 December. This species is rare in this area (Carter, 1971).

Sage Thrasher (*Oreoscoptes montanus*): One was collected in the golf course area on 19 September (DC, JHC). First specimen taken in state (details to be published elsewhere). One previous, but unpublished, sight record for North Carolina.

Water Pipit (*Anthus spinoletta*): A high count of 125 was recorded on 21 December (JF, CM; SPCC).

Bachman's Sparrow (*Aimophila aestivalis*): One was flushed from a weed patch along the golf course on 21 September. This species is very uncommon in the Sandhills area. (Carter, 1971)

Lapland Longspur (*Calcarius lapponicus*): One was seen on 17 November (JHC, JF, CM, DM), and 5 were seen on 21 December (JF, CM; SPCC). First records for area.

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Sandhill Crane at Charleston, S.C.

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16 May 1974

On the morning of 2 February 1974, while standing on the lawn of 8 Huguenot Avenue, St. Andrew's Parish, Charleston, S.C., I watched a single Sandhill Crane (*Grus canadensis*) for about 30 seconds as it flew in a southwesterly direction over Huguenot Avenue, disappearing over a stand of pines beyond the intersection of Huguenot Avenue and Farmfield Road. When first noted, the bird was passing over the western end of Farmfield Pond, a diked saltmarsh area of about 2 acres. Now brackish, this pond contains good stands of cattail and *Juncus*. At the time of observation (09:15), the sky was overcast and the temperature 64 F. When first seen, the crane appeared to be at a height of about 100 feet, and a distance of approximately 250 feet. It showed the extended neck and characteristic crane flight, but did not soar or call when within sight.

[Several records of this unmistakable bird are summarized by Sprunt and Chamberlain (*South Carolina Bird Life*, 1970, p. 191-192 and 595-596). More recently, one adult was observed 4 March 1973 near Chester (*Chat*, 37:53) and another 19 September 1973 on Sullivan's Island (*Chat*, 37:30). The present sighting is the only one known from South Carolina in early February.—JRH]

Saw-whet Owls Found in Carteret County, N.C.

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7 February 1974

On 18 December 1973, I found a dead Saw-whet Owl (*Aegolius acadicus*) on Ft. Macon Road, 1 mile E of Atlantic Beach, N.C. The bird, although badly mutilated, appeared to have been killed recently, possibly the night before. On 6 January 1974, before dawn, I observed a Saw-whet Owl at a distance of about 10 feet with the aid of a 6-volt flashlight. This sighting also occurred on Bogue Banks east of Atlantic Beach at a location about 1/4 mile from the road kill. The bird was not calling, and it may have been attracted by a Screech Owl tape recording that was being played. These are the first records of the Saw-whet Owl from Carteret County.

[It is likely that this small owl is more common in eastern North Carolina in winter than is realized. Observers should be on the lookout for this bird throughout the eastern part of the state. See the related article by Simpson in this issue for recent information on the status of the Saw-whet Owl in western North Carolina.—DEPT. ED.]

Recent Observations of Saw-whet Owls in the Southern Great Balsam and Black Mountains of North Carolina

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22 May 1974

In previous articles (Simpson, 1968, 1972a, 1972b), I have reviewed records of the Saw-whet Owl (*Aegolius acadicus*) from the southern Great Balsam and Black Mountains of western North Carolina. The following observations have been obtained subsequently.

BLACK MOUNTAINS (Yancey County)

Clyde Hopson (pers. com.) reported regular calling by Saw-whet Owls along the north slope of Mt. Hallback (elevation 6,200 feet) in Mt. Mitchell State Park during May, June, and July of 1971, 1972, and 1973. Individual owls were observed with flashlights near the restaurant parking lot on 10 and 13 August 1971 and again on several occasions in June 1972 and 1973. Hopson reported that a single owl had been calling near the restaurant each night after sunset during the period of 20 April to 10 May 1974; and on several occasions, Hopson was able to observe the owl at close range by use of a flashlight. These records combined with previous sightings reviewed by Simpson (1968, 1972b) indicate that the species is a regular although uncommon summer and spring resident in forests of red spruce (*Picea rubens*) and Fraser fir (*Abies fraseri*) in the Mt. Mitchell area.

SOUTHERN GREAT BALSAM MOUNTAINS (Haywood, Jackson, and Transylvania Counties)

On 14 May 1974, I conducted a spot check of known calling areas along the Blue Ridge Parkway from Locust Gap to Silvermine Bald. A total of five Saw-whet Owls were calling in the range, and three of the five records were from locales where the species has not been previously encountered.

At 21:15 a single owl was calling from the peak of Lone Bald (elevation 5,400 feet) just above the Parkway. A second owl was heard at 22:30 in Sugar Cove (elevation 5,000 feet) on the N slope of Reinhart Knob. At 23:00 two owls were calling loudly just west of Tanasee Bald Overlook. Subsequent investigation revealed that one of the owls was near the summit of Herrin Knob (elevation 5,700 feet), while the other was calling from the crest of Fork Ridge (elevation 5,800 feet) approximately 1,000 feet N of Mt. Hardy. Later the same night, I returned to the overlook with a group of Carolina Bird Club members, including Ted Beckett, Walter Holland, Ramona Snavely, and Ida Winkler, and we found the two owls still actively calling. At 23:30 our group located a single owl calling from the north slope of Devil's Courthouse (elevation 5,600 feet).

Previous one night surveys along this range have yielded totals of four to seven owls, with five being about average. Each of the five records from the present survey was from the typical habitat of spruce-fir forest with moderate to extensive infiltration with species found in secondary successional, northern hardwood, or heath bald communities.

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Hermit Thrush Practices Foot-patting Feeding Behavior

ELOISE F. POTTER and RICKY DAVIS
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20 April 1974

About 09:00 the morning of 18 April 1974, we watched a Hermit Thrush (*Catharus guttatus*) walking on leaf litter covering the mud at the edge of a swamp near Zebulon, Wake County, N.C. The bird repeatedly patted the leaves with rapid foot motions, patting several times at one place before moving a few steps to another spot. The bird seemed to use the right foot or the left indiscriminately. As the foot was raised, the unfanned tail was lowered; and as the foot touched the leaves, the tail was raised. At first glance the bird appeared to be scratching its breast, but close study revealed that the toes touched only the leaves. Some of the foot-patting episodes were followed immediately by short runs that apparently ended in the capture of prey. During the approximately 5 minutes that the bird was in sight, we did not see it forage by scratching in the leaves with its feet, by flipping leaves with its beak, or by probing in the mud. While tending her yard in early April, Potter noted an unusually large number of torpid wasps, moths, and beetles beneath oak leaves used as mulch. The Hermit Thrush's foot-patting foraging technique seems well adapted to disturbing such creatures so they could be captured easily during short, sluggish flights. Foot-trembling or foot-patting feeding behavior has been reported in various shorebirds including the Piping Plover (*Chat*, 28:30), but to the best of our knowledge it has not been noted previously in the Hermit Thrush. Indeed, never before have we seen any passerine foraging in this manner.

Dickcissel Colony in Anderson County, S.C., in Summer

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15 October 1974

During July 1974 a colony of Dickcissels (*Spiza americana*) was present in a large field about 2 miles S of Townville, Anderson County, S.C. On 11 July I found six singing males and one female in the field, which had mixed grass-forb vegetation averaging approximately 3 feet in height. The males were obviously on territory and apparently had arrived only recently, as I did not detect the species in this field in May and June. I found four singing birds on 15 July and two on 20 July. On 28 July I found only one female, and she seemed disturbed when I approached her, acting as if there were a nest in the area. I did not see or hear any Dickcissels on a visit to the field on 10 August. I found no evidence of nesting by the colony, and I doubt that the birds actually did nest during their brief stay near Townville.

White-winged Crossbills at Durham, N.C.

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10 March 1974

At about 10:00 on 28 February 1974, I was looking for crossbills in a stand of mature pines on the north edge of the Hillandale Golf Course, along Indian Trail Drive in Durham, N.C. In the top of a pine perhaps 20 yards above me, I saw quite clearly in excellent light, through 7 x 50 binoculars, a male White-winged Crossbill (*Loxia leucoptera*). The bird had two wingbars, and some of the wing feathers were tipped with white. Its body color was pinker than that of the Red Crossbills (*L. curvirostra*) I have seen. The bird made no call. I did not find the bird on subsequent searches.

[This appears to be the first record of the White-winged Crossbill in the North Carolina piedmont since the winter of 1963-1964 when the species was found at Greensboro and near Statesville (*Chat,* 28:21 and 74).—DEPT. ED.]

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates 1974)

CORY'S SHEARWATER: Pelagic cruise parties found this species fairly common in Gulf Stream waters off the North Carolina coast in late June and July, highlighted by a tally of 92 off Cape Hatteras on 17 July by Bill Williams. Greater and Audubon's Shearwaters were seen also, but only in small numbers.

LEACH'S STORM-PETREL: Five were seen off Hilton Head Island, S.C., during a cruise on 22 June by Royce Hough.

WILSON'S STORM-PETREL: Forty were seen off Hilton Head Island, S.C., on 22 June by Royce Hough, 121 were sighted in the Gulf Stream off Cape Hatteras, N.C. on 17 July by Bill Williams.

GANNET: One was seen at Ocracoke Inlet on the North Carolina Outer Banks on the late date of 3 June by Paul Buckley.

DOUBLE-CRESTED CORMORANT: An immature bird was a locally uncommon summer visitor at Roanoke Rapids Lake, sighted near Vultare, N.C., on 14 July by Merrill Lynch.

MAGNIFICENT FRIGATEBIRD: One was seen over the sound at Topsail Island, N.C., on 9 June by Gail and David Whitehurst.

LITTLE BLUE HERON: A visiting flock of a dozen was present at the Rocky Mount, N.C., Reservoir on 24 and 25 July, observed by Betty Davis, Lloyd Davis, and Louis Fink. Other sightings of inland wanderers, all immatures, were noted during the post-breeding period in late June and July at Southern Pines, Raleigh, Chapel Hill, Greensboro, and Winston-Salem.

LOUISIANA HERON: An immature was found at Reynolda Lake near Winston-Salem on 23 July by Fran Baldwin, the first known local record for Forsyth County, N.C.

LEAST BITTERN: Three individuals were found by Merrill Lynch on 4 June in a large cattail and sedge marsh at the site of Albemarle Paper Company's wastewater treatment ponds near Gaston in Northampton County, N.C. This is the same site where a flightless juvenile was captured last summer (see *Chat*, 37:108). Elsewhere inland, two were seen by Harry LeGrand at Lake Hartwell near Clemson, S.C., on 18 June and the species is presumed to be breeding there.

WOOD STORK: Summering birds were unusually conspicuous in the Charleston, S.C., area where flocks of 20 or more were seen during the season by a number of observers, fide Perry Nugent. One was seen as far north as Morehead City, N.C., on 12 June by Don McCrimmon, and nine were seen in Brunswick County, N.C., across the Cape Fear River from Wilmington on 2 June by James Parnell and Robert Soots.

WHITE IBIS: An immature turned up as a post-breeding wanderer at Big Lake in Umstead State Park near Raleigh, N.C., on 22 June, observed by Charles Balducci, Nelson Chadwick, and Cheryl Horne. Single immatures were seen also in Chatham County, N.C., 10 miles SE of Chapel Hill, on 24 June by Robin Carter and at Winston-Salem, N.C., on 11 July by Fran Baldwin.

ROSEATE SPOONBILL: An individual in adult plumage was seen at North River Marsh near Morehead City, N.C., in mid-July by Alan Powell, fide John Fussell. The bird was present at least 2 days, 12 and 13 July.

FULVOUS TREE DUCK: Two late lingerers were still present on 26 June on the North Carolina Outer Banks at Pea Island Refuge following last winter's influx into the Carolinas (see *Chat*, 38:47).

REDHEAD: A late straggler was seen near Davis in Carteret County, N.C., on 15 June by John Fussell and Tom Wade.

RED-BREASTED MERGANSER: Evidence of successful breeding in the Charleston, S.C., area was reported by Ted Beckett. A nesting pair raised five young on Bohicket Creek.

MISSISSIPPI KITE: Frequent sightings were recorded along the Great Pee Dee River in the Bennettsville-Society Hill, S.C., area this summer by Robert Campbell. On 13 July up to seven birds were seen, including at least one immature. Local breeding is indicated.

SHARP-SHINNED HAWK: One was seen in NE Warren County, N.C., on 4 June by Harry LeGrand, and two (a pair?) were seen near Apex in Wake County, N.C., on 23 July by John Wright. Another was sighted in northern Pickens County, S.C., on 16 June by Robert Beason, Sidney Gauthreaux, and Harry LeGrand. All nesting season sightings of Accipiters are worth reporting in view of the scarcity of information of their summer resident status in the region.

MARSH HAWK: A single bird was seen on 13 June near Manteo, N.C., by James Parnell. Elsewhere in the coastal area two late spring and early summer sightings were recorded at Cedar Island Refuge, Carteret County, N.C., where individuals were observed on 10 June by James Parnell and on 4 July by John Fussell.

OSPREY: A locally uncommon summer visitor was sighted at Lake Benson in Wake County, N.C., on

21 July by Chris Marsh and John Wright. At Lake Tillery near Albemarle, N.C., another was seen on 27 July by Jay Carter. No nesting records have been reported from these inland piedmont lakes.

KING RAIL: One was seen 28 July near Townville, S.C., by Harry LeGrand. The species' local nesting status there is unknown.

AMERICAN COOT: Two were seen at Lake Benson, Wake County, N.C., on 21 July by Chris Marsh and John Wright.

SEMIPALMATED PLOVER: One was early and unusual at Winston-Salem, N.C., on 25 July, observed by Ramona Snavely, Charles Frost, and Fran Baldwin.

BLACK-BELLIED PLOVER: A late spring transient was found inland at Albemarle Paper Company's wastewater treatment ponds near Gaston, N.C., on 4 June by Merrill Lynch.

WHIMBREL: Thirty-nine were counted on the Outer Banks at Frisco on 27 July by Jim Weigand.

UPLAND SANDPIPER: Summer occurrences were reported from the Outer Banks where single birds were seen at Cape Point on Hatteras Island, N.C., on 24 June by Joe Hudick and at Wright Memorial, Kitty Hawk, N.C., on 14 July by Paul DuMont.

GREATER YELLOWLEGS: An early fall migrant was noted inland near Chapel Hill, N.C., on 21 July by Stanley Alford, Angelo Capparella, and Robin Carter. Another was seen at Winston-Salem on 25 July by Fran Baldwin, Charles Frost, and Ramona Snavely.

LESSER YELLOWLEGS: An inland transient was observed at Raleigh, N.C., on 22 July by Chris Marsh.

PECTORAL SANDPIPER: A flock of 30 was seen at Winston-Salem on 25 July by Fran Baldwin, Charles Frost, and Ramona Snavely. One was seen as early as 19 July at Raleigh by Chris Marsh, and eight were noted there on 23 July by the same observer.

WHITE-RUMPED SANDPIPER: June occurrences were noted on the Outer Banks where 11 were found at Cape Point on Hatteras Island, N.C., on 3 June by Paul Buckley and at least 20 were present at Oregon Inlet on 26 June, observed by John Wright.

LEAST SANDPIPER: An early inland fall transient was found at Raleigh, N.C., 17 July by Chris Marsh, and 10 were recorded at Winston-Salem, N.C., on 25 July by Charles Frost, Fran Baldwin, and Ramona Snavely.

WESTERN SANDPIPER: A flock of 21 fall migrants was counted at Raleigh on 21 July by Chris Marsh, and three were seen at Winston-Salem on 25 July by Ramona Snavely, Fran Baldwin, and Charles Frost.

MARBLED GODWIT: June sightings were recorded on the North Carolina Outer Banks where three birds were seen at Ocracoke Inlet on 3 June by Paul Buckley and another at Oregon Inlet on 26 June by John Wright.

SANDERLING: Two inland transients were seen at Winston-Salem on 25 July by Fran Baldwin, Charles Frost, and Ramona Snavely.

CASPIAN TERN: Two were seen inland at Roanoke Rapids Lake near Vultare, N.C., on 13 July by Merrill Lynch.

ROSEATE TERN: One was seen at Hatteras Island, N.C., on 3 June by Paul Buckley.

BLACK TERN: A fall migrant was seen at Huntington Beach State Park near Murrell's Inlet, S.C., as early as 22 July by F.M. Probst.

MONK PARAKEET: In the Charleston, S.C., area an adult bird was observed at Fort Johnson on James Island on 2 June by Julian Harrison. On 17 July another individual was seen at the USDA Vegetable Breeding Laboratory near Charleston by Perry Nugent. Since a feral population became established on Long Island, N.Y., in 1967, this South American exotic has been found in 27 states. All sightings of Monk Parakeets should be reported so that the species' status can be monitored.

BLACK-BILLED CUCKOO: On 25 July one was heard calling, and presumed to be on territory, along the Blue Ridge Parkway within the Cherokee Indian Reservation, Jackson County, N.C. The observer was Harry LeGrand.

WILLOW FLYCATCHER: Wendell Smith reports the destruction of the small wooded bog at North Wilkesboro, N.C., which has been a breeding site for Willow Flycatchers for many years. This site, on which a note was first published in 1957 (see *Chat*, 21:3), was a casualty of urban development. At Raleigh, N.C., where a small colony has attempted nesting the past several years, no positive evidence of success was noted this season, as reported by Chris Marsh and Robert Hader. No other established nesting locations for Willow Flycatchers are presently known in the Carolinas.

GRAY KINGBIRD: One was seen on Sullivan's Island near Charleston, S.C., on 21 May by Kent Nelson.

SCISSOR-TAILED FLYCATCHER: An individual was sighted near the south end of Oregon Inlet bridge on the North Carolina Outer Banks on 15 June by Joe Hudick.

BANK SWALLOW: A late migrant was seen at Rowland, N.C., on 16 June by Jay Carter.

CLIFF SWALLOW: An active nest was found at Clemson, S.C., in July by Sidney Gauthreaux and

Carl Helms, and another during the same period under the I-85 bridge over Lake Hartwell on the South Carolina-Georgia border by Carl Helms. Cliff Swallows were first found nesting at Hartwell Dam in 1965 (*Chat*, 29:95).

COMMON RAVEN: Two were seen at about 2,800 feet elevation near the Walhalla Fish Hatchery in Oconee County, S.C., on 9 June by Robert Beason, Sidney Gauthreaux, and Harry LeGrand. Ravens are not known to be breeding in that locality.

FISH CROW: Summer records were reported from Clemson, S.C., where five birds were found on 23 June and two on 8 July by Harry LeGrand.

BLACK-AND-WHITE WARBLER: Several singing males were found on territory in June and July by Merrill Lynch along Hoggard Mill Creek near Windsor, Bertie County, N.C. This species evidently is breeding at least sparingly in the coastal plain section of North Carolina.

SWAINSON'S WARBLER: Eight were noted on 16 June in Pickens County, S.C., along US 178 between Rocky Bottom and the North Carolina state line by Sidney Gauthreaux, Harry LeGrand, and Robert Beason, indicating a good summer population in that locality. A rare summer record for Wake County, N.C., was recorded at Swift Creek near Raleigh where an individual was seen on 14 July by Chris Marsh. Nesting was not definitely verified.

WORM-EATING WARBLER: A singing male, on territory, was seen 7 and 13 July at Occoneechee Mountain on the Eno River near Hillsborough, N.C., by James Pullman, Elizabeth Teulings, and Robert Teulings, a rare summer record for the piedmont.

BLACK-THROATED GREEN WARBLER: An individual, presumed to be an early migrant, was an unexpected find in a residential area near downtown Greensboro, N.C., on 13 July, observed by Jim Weigand.

CERULEAN WARBLER: The presence of an apparent nesting population has been reported by Chris Marsh from SW Polk County, N.C., where five singing males were noted in a localized area at an elevation of 1,400 feet, in late May and early June.

BOBOLINK: A late spring migrant was seen at Oregon Inlet on the North Carolina Outer Banks on 3 June by Paul Buckley.

SCARLET TANAGER: A summer record from the Rocky Mount, N.C., area in the upper coastal plain was reported by Louis Fink, who observed a male on the grounds of Nash Memorial Hospital on 2 July. The bird's calls were answered by a second tanager, indicating the presence of a pair.

HOUSE FINCH: A male and female lingered at Winston-Salem, N.C., as late as 19 June, fide Ramona Snavely. At Charlotte, N.C., Elizabeth Clarkson reported a pair still present at her feeder on 8 July. There was no evidence of nesting.

PINE SISKIN: A late straggler was seen at Winston-Salem, N.C., on 16 June, Ramona Snavely.

VESPER SPARROW: The presence of a singing male was noted 5 miles NW of Cashiers in Jackson County, N.C., on 10 June by Harry LeGrand, well south of the species' known breeding range.

LARK SPARROW: An individual in sub-adult or molting adult plumage was seen at the Wright Memorial, Kitty Hawk, N.C., on 14 July by Paul DuMont.

BACHMAN'S SPARROW: Eight singing males were noted in the vicinity of Newport, N.C., Carteret County, on 5 July by John Fussell and Chris Marsh. In the North Carolina Sandhills, a nesting pair was found in Fort Bragg Reservation in western Hoke County on 8 June by Jay Carter, and two other individuals were seen in the Camp MacKall Military Reservation, Scotland County, on 11 June by the same observer. Elsewhere, a pair was found during June near Clemson, S.C., by Harry LeGrand. Extensive searching turned up no additional summering birds in the Clemson area.

WHITE-THROATED SPARROW: A late winter straggler was seen at Mason Farm near Chapel Hill, N.C., on 9 June by Robin Carter.

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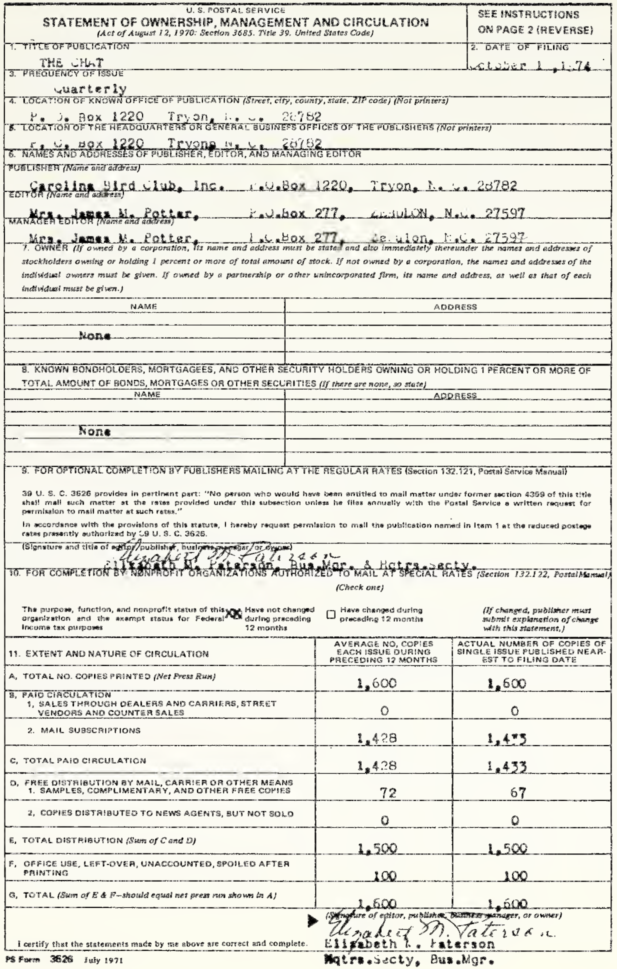

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Elizabeth M. Paterson, Bus.Mgr. & Hqtrs.Secty.

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Elizabeth M. Paterson
Elizabeth M. Paterson
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PS Form 3626 July 1971

Carolina Bird Club
INC.

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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from State and Federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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All CBC members not in arrears for dues receive *The Chat*, a quarterly journal devoted to bird study and conservation, and the *CBC Newsletter*, which carries information about meetings, field trips, and club projects. Articles intended for publication in *Chat* may be sent to the Editor or to the appropriate department editor listed in a recent issue of the bulletin. Items for the *Newsletter* should be sent to its Editor, F.M. Probst, Route 2, Box 80-C2, Pawley's Island, S.C. 29585. Correspondence regarding memberships, changes of address, or requests for back numbers of either publication should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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The Chat

Bulletin of the Carolina Bird Club, Inc.

Vol. 39 March 1975 No. 1

The Chat

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Published by the Carolina Bird Club, Inc.

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OUR COVER—A Black-and-white Warbler perches beside a quiet pool in the photograph by John Trott of McLean, Virginia.

SMITHSONIAN
MAY 22 1975
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CBC Roundtable

... with Louis C. Fink

Ornithogolfing

That's what Roger Peterson calls it—the game enjoyed by so many of us who study birds. You can keep a life list of all the birds you've seen in North America—or in the world, if you've had a chance to travel. (For example, I claim 408 species in North America, and 32 more in Europe.) There are Christmas counts, and Spring counts, and Big Day counts in May.

The American Birding Association publishes records for each State: the game here is to identify as many as possible of the available birds in your own State, or someone else's. The "possible" total for South Carolina is given as 370 species; for North Carolina, 400. Dennis Forsythe reports seeing 91% of the birds in South Carolina; Frederick Probst and Harry LeGrand 64%; Bruce Mack from Florida, 62%; Renee Probst 61%. All those who claim over 50% are published in *Birding*, the A.B.A. magazine.

Harry LeGrand tops the observers in North Carolina, with 320 species, or 80% of the available birds. Edmund LeGrand has 78%; Gilbert Grant 76%; J.H. Carter 75%; Eloise Potter 73%; Merrill Lynch 71%.

I added up my own total just for fun. It's about 50% of the available North Carolina birds. I've seen another 30%, but not in North Carolina—and that's what counts.

Hunting the Hunters

Mankind? is a new book by Cleveland Amory (Harper and Row, New York, $9.95) which takes off without mercy against people who hunt for "fun, money, or revenue." He is critical of Lyndon Johnson, Teddy Roosevelt, Joe Namath, and a hundred other personalities who have spoken of the delights of killing. He writes sarcastically of men who go forth to wage battle, armed with automobiles, protective clothing, and guns—"against a mourning dove." The book begins with an account of the killing of rabbits with sticks, stones, and human feet—in Harmony, North Carolina. The book may make you angry.

Recently Published

Rare & Endangered Birds of the Southern National Forests is a survey prepared for the Southern Region of the Forest Service by E. Burnham Chamberlain, Curator Emeritus of The Charleston Museum, Charleston, S.C. For each of the 22 species discussed, the author gives the general distribution and status, life history and habitat requirements, and relationship to National Forests. Chamberlain offers considerable hope for the preservation of such species as the Osprey and Red-cockaded Woodpecker, but he is not at all optimistic regarding the future of the Ivory-billed Woodpecker, the decline of which can be attributed to the loss of sufficiently large tracts of suitable habitat. The possibility of restoring adequate habitat through practical forest management is "very doubtful."

CHRISTMAS BIRD COUNT 1974	Total Individuals	COAST						COASTAL PLAIN							PIEDMONT												MOUNTAINS			
		Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 22 December	Wilmington, N.C. 14 December	Litchfield-Pawleys Is., S.C., 28 December	Charleston, S.C. 29 December	Hilton Head Is., S.C. 28 December	Beaufort Co., N.C. 29 December	Pamlico Co., N.C. 26 December	Dillon, S.C. 31 December	Southern Pines, N.C. 16 December	Roanoke Rapids, N.C. 18 December	Columbia, S.C. 14 December	Aiken, S.C. 22 December	Raleigh, N.C. 21 December	Durham, N.C. 15 December	Chapel Hill, N.C. 22 December	Rockingham Co., N.C. 15 December	Greensboro, N.C. 28 December	Winston-Salem, N.C. 28 December	Iredell Co., N.C. 29 December	Charlotte, N.C. 28 December	Greenville, S.C. 28 December	Clemson, S.C. 14 December	Elkin-Ronda, N.C. 26 December	Caldwell Co., N.C. 30 December	Tryon, N.C. 30 December	Buncombe Co., N.C. 14 December	Brevard, N.C. 28 December	G.S.M.N.P. 29 December
Common Loon	591	169	43	165	175	17	16	....	....	....	1	2	....	....	2	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Red-throated Loon	411	200	1	24	110	4	72	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Red-necked Grebe	3	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Horned Grebe	250	7	19	19	27	99	40	....	....	....	1	21	....	....	6	....	....	....	....	....	....	....	....	4	....	....	....	6	1	....
Eared Grebe	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pied-billed Grebe	650	134	44	61	23	40	60	29	32	2	25	36	6	8	43	9	10	....	43	9	2	10	3	12	....	....	....	8	1	....
Brown Pelican	262	3	2	....	28	42	187	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gannet	2,167	2,100	32	21	13	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dbl.-cr. Cormorant	1,229	43	777	289	4	22	94	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Anhinga	12	....	....	2	2	....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Blue Heron	475	95	41	105	55	30	61	4	4	2	5	17	4	2	8	7	7	2	7	8	....	1	....	10	....	....	....	....	....	....
Green Heron	9	1	....	....	1	....	7	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Little Blue Heron	72	15	4	17	7	13	16	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cattle Egret	3	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Egret	241	47	10	57	32	31	63	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Snowy Egret	205	33	10	31	16	23	92	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Louisiana Heron	219	33	18	50	49	42	27	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black-cr. Night H.	154	51	67	26	5	2	3	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Yellow-cr. Night H.	4	....	....	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Least Bittern	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
American Bittern	16	11	....	1	....	....	1	....	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Glossy Ibis	29	25	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
White Ibis	127	2	3	114	4	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Whistling Swan	597	350	....	....	....	9	....	238	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Canada Goose	3,851	1,700	....	18	100	....	....	215	....	9	....	1,012	....	....	8	6	....	1	7	513	....	26	....	....	235	....	....	....	1	....
Snow Goose	10,018	10,017	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mallard	1,912	127	34	519	231	61	46	105	....	8	16	74	17	5	129	27	2	12	78	164	5	22	4	3	200	....	21	....	2	....
Black Duck	1,497	1,000	23	54	104	95	63	....	....	....	23	3	....	....	27	....	....	....	2	56	1	4	....	30	12	....	....	....	....	....
Gadwall	670	560	3	5	30	10	3	....	....	....	6	2	....	....	45	....	....	....	....	....	....	6	....	....	....	....	....	....	....	....
Pintail	5,734	5,650	20	3	....	60	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Green-winged Teal	3,719	3,600	51	15	....	13	4	....	....	....	1	....	....	....	28	....	....	....	....	2	....	2	....	3	....	....	....	....	....	....
Blue-winged Teal	119	4	5	13	16	80	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....
American Wigeon	3,015	930	13	12	300	1,506	5	104	....	....	....	86	....	....	32	....	....	....	3	8	....	16	....	....	....	....	....	....	....	....
N. Shoveler	2,196	2,000	....	42	3	150	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wood Duck	314	....	13	69	18	37	11	52	1	....	3	15	6	4	9	9	....	....	8	2	2	18	....	19	....	....	....	....	18	....
Redhead	679	650	1	....	1	12	....	1	9	....	....	....	....	....	....	....	....	....	2	....	....	2	1	....	....	....	....	....	....	....
Ring-necked Duck	1,122	43	2	10	45	52	95	12	....	5	88	132	67	....	388	....	*	1	16	1	....	49	....	1	....	....	....	115	....	....
Canvasback	635	228	....	134	60	55	....	36	101	....	....	3	....	....	9	....	6	....	....	....	....	2	....	....	....	....	....	1	....	....
Greater Scaup	60	15	....	....	....	....	39	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lesser Scaup	1,478	29	....	7	....	....	1,412	1	7	....	3	....	....	....	12	....	....	....	3	....	....	....	4	....	....	....	....	....	....	....
Scaup (sp. ?)	2,301	....	....	5	....	2,061	....	6	228	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Common Goldeneye	26	11	10	....	....	2	2	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

CHRISTMAS BIRD COUNT 1974		COAST						COASTAL PLAIN							PIEDMONT												MOUNTAINS			
	Total Individuals	Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 22 December	Wilmington, N.C. 14 December	Litchfield-Pawleys Is., S.C., 28 December	Charleston, S.C. 29 December	Hilton Head Is., S.C. 28 December	Beaufort Co., N.C. 29 December	Pamlico Co., N.C. 26 December	Dillon, S.C. 31 December	Southern Pines, N.C. 16 December	Roanoke Rapids, N.C. 18 December	Columbia, S.C. 14 December	Aiken, S.C. 22 December	Raleigh, N.C. 21 December	Durham, N.C. 15 December	Chapel Hill, N.C. 22 December	Rockingham Co., N.C. 15 December	Greensboro, N.C. 28 December	Winston-Salem, N.C. 28 December	Iredell Co., N.C. 29 December	Charlotte, N.C. 28 December	Greenville, S.C. 28 December	Clemson, S.C. 14 December	Elkin-Ronda, N.C. 26 December	Caldwell Co., N.C. 30 December	Tryon, N.C. 30 December	Buncombe Co., N.C. 14 December	Brevard, N.C. 28 December	G.S.M.N.P. 29 December
Bufflehead	712	280	20	40	20	87	118	1	....	....	2	....	....	....	48	....	1	....	30	....	....	49	....	5	....	....	....	....	11	....
Oldsquaw	10	....	....	....	....	....	....	....	10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Common Eider	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
White-winged Scoter	45	....	1	....	....	40	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Surf Scoter	121	20	....	1	....	....	100	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black Scoter	231	28	....	....	3	25	175	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Scoter (sp. ?)	41	26	7	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ruddy Duck	699	77	1	4	2	15	5	342	54	....	10	....	....	....	184	....	....	....	2	....	....	3	....	....	....	....	....	....	....	....
Hooded Merganser	463	113	9	20	47	25	30	....	....	....	65	56	....	....	84	1	2	....	....	....	2	1	....	3	....	....	....	....	5	....
Common Merganser	4	....	*	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Red-br. Merganser	14,169	13,600	118	231	23	51	91	....	....	....	....	....	....	....	54	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Turkey Vulture	200	....	16	6	1	6	20	....	....	....	....	19	5	12	*	33	24	7	....	35	4	....	....	6	2	....	2	1	....	1
Black Vulture	117	....	4	5	5	34	18	....	....	....	....	3	6	12	....	*	5	....	....	15	7	....	1	2	....	....	....	....	....	....
Sharp-shinned Hawk	63	16	6	3	3	6	3	....	2	....	3	2	....	4	3	2	2	1	2	....	....	....	1	4	....	....	....	....	....	....
Cooper's Hawk	20	3	....	2	....	5	....	....	....	....	....	....	....	2	1	....	....	....	1	1	1	1	....	1	1	....	1	....	....	....
Red-tailed Hawk	325	1	7	16	6	13	17	4	13	6	4	8	26	16	28	26	22	10	10	9	7	31	2	31	1	1	....	4	3	3
Red-shouldered H.	83	2	6	10	11	3	15	....	....	....	....	1	5	3	1	7	6	....	1	1	....	6	....	2	....	1	....	2	....	....
Broad-winged Hawk	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
Rough-legged Hawk	3	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Marsh Hawk	165	53	11	19	6	17	9	1	7	3	2	2	4	3	....	2	6	1	....	....	6	6	1	4	.	.	1	....	1	....
Osprey	2	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Peregrine Falcon	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Merlin	10	3	....	3	3	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....
Am. Kestrel	525	48	52	23	25	29	66	37	49	6	9	12	15	22	25	7	11	3	21	6	17	5	1	21	1	2	1	1	8	2
Ruffed Grouse	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	4	2	5
Bobwhite	846	....	31	13	6	5	77	2	7	8	52	80	3	16	91	4	49	76	44	54	51	56	12	30	8	15	16	15	25	....
Ring-neck. Pheasant	62	62	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Turkey	*	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
King Rail	21	10	....	2	....	3	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Clapper Rail	184	15	31	26	18	33	61	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Virginia Rail	51	28	12	4	1	1	....	....	2	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sora	14	4	2	2	2	2	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Common Gallinule	95	....	3	17	14	47	13	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
American Coot	2,450	516	103	322	228	221	13	166	*	....	20	....	17	....	699	....	1	....	50	29	1	11	23	30	....	....	....	....	....	....
Am. Oystercatcher	4,372	....	23	211	15	4,063	60	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Semipalmated Plover	556	14	95	129	50	10	258	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Piping Plover	154	39	81	8	18	....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Killdeer	998	20	12	30	....	5	99	1	84	19	11	96	19	5	91	52	49	3	3	62	46	71	1	210	....	....	....	8	....	1
Bl.-bellied Plover	1,447	600	111	498	55	77	106	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ruddy Turnstone	408	15	30	164	18	26	155	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Am. Woodcock	46	9	12	*	1	3	....	....	....	2	1	1	1	1	6	2	....	....	....	2	*	2	....	3	....	....	....	....	....	....
Common Snipe	435	158	28	26	19	78	....	....	....	....	....	3	....	1	10	4	1	....	....	74	....	1	....	27	....	....	5	....	....	....

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Long-billed Curlew	2	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Whimbrel	2	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Spotted Sandpiper	35	....	....	1	1	....	32	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....
Willet	853	1	86	327	20	323	96	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Greater Yellowlegs	246	66	15	119	1	31	14	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Lesser Yellowlegs	39	16	1	11	6	2	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Red Knot	56	....	8	....	7	....	41	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Purple Sandpiper	3	....	1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
White-rumped Sandpiper	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Least Sandpiper	116	62	8	4	....	6	25	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	11	....	....	....	....	....	....
Dunlin	10,369	3,900	1,909	3,813	227	48	470	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....
Short-bill. Dowitcher	477	5	170	294	....	....	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Long-bill. Dowitcher	62	50	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dowitcher (sp. ?)	1,849	4	....	....	225	1,620	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Semip. Sandpiper	675	....	79	262	150	76	108	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Western Sandpiper	332	67	9	40	35	11	170	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Marbled Godwit	531	4	14	12	....	500	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sanderling	1,550	1,090	103	109	53	15	180	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
American Avocet	101	101	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Parasitic Jaeger	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Glaucous Gull	1	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gr. Bl.-backed Gull	1,526	1,470	11	19	18	....	....	7	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Herring Gull	14,926	9,800	2,980	702	800	169	415	2	23	....	12	21	....	....	2	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....
Ring-billed Gull	21,499	11,500	1,742	780	1,250	196	263	54	176	....	....	5,298	113	....	1	....	....	....	90	*	....	....	....	36	....	....	....	....	....	....
Laughing Gull	921	531	38	187	80	50	35	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Bonaparte's Gull	103	48	1	5	1	1	47	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black-leg. Kittiwake	8	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gull-billed Tern	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Forster's Tern	1,008	422	53	370	2	33	128	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Common Tern	40	4	....	....	5	4	27	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Royal Tern	473	90	14	122	36	203	6	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sandwich Tern	3	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Caspian Tern	46	....	....	4	27	....	8	....	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black Skimmer	1,270	75	55	634	500	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Rock Dove	2,226	3	100	129	10	....	8	105	11	17	5	23	24	28	608	115	43	108	110	490	14	88	7	44	37	43	35	13	8	....
White-winged Dove	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mourning Dove	9,034	26	131	137	14	136	1,465	205	186	70	182	436	121	41	564	1,588	278	218	435	476	205	443	109	373	319	63	26	255	469	63
Ringed Turtle Dove	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5	....	....	....	....	....	....	....	....	....	....
Ground Dove	40	....	....	4	32	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Yel.-billed Cuckoo	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Barn Owl	13	5	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	1	....	2	....	....	....	....	2	....	1	....	....
Screech Owl	63	2	7	2	5	....	1	....	....	....	3	6	....	1	12	2	....	1	....	5	....	....	1	9	....	1	2	2	....	1

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Great Horned Owl	42	2	2	1	2	1	2	....	....	1	....	1	....	2	9	3	....	4	....	1	1	....	....	8	1	....	....	1	....	....
Barred Owl	40	....	2	2	1	4	3	....	....	....	3	3	2	....	5	2	6	1	1	*	*	2	....	1	2	....	....	....	*	....
Short-eared Owl	4	....	2	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Whip-poor-will	2	....	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Belted Kingfisher	507	36	36	63	43	68	68	7	14	2	7	3	7	4	22	14	4	7	21	19	1	4	1	25	....	....	3	1	10	17
Common Flicker	1,838	236	61	126	66	107	188	80	39	33	48	93	59	138	99	82	65	20	50	54	24	36	7	48	12	6	6	18	27	10
Pileated Woodpecker	261	1	5	6	3	34	64	6	2	8	....	10	6	18	2	1	7	2	....	1	4	....	1	8	4	3	10	13	23	19
Red-bellied Woodp.	870	16	14	23	27	54	87	16	3	6	28	38	26	53	78	74	76	19	61	54	15	26	4	31	11	3	9	7	5	6
Red-headed Woodp.	112	....	6	1	....	5	*	8	....	....	9	....	42	7	5	2	9	....	8	1	1	1	1	2	....	....	4	....	....	....
Yel.-bel. Sapsucker	367	2	4	9	26	42	28	5	3	5	17	13	19	28	23	24	20	13	14	19	7	2	1	11	6	3	....	12	4	7
Hairy Woodpecker	171	2	2	3	....	17	4	1	....	2	7	5	1	5	16	18	11	7	12	10	11	5	1	4	1	....	2	3	10	11
Downy Woodpecker	617	14	14	6	14	28	15	9	7	8	24	28	17	27	56	32	30	23	45	32	18	10	2	8	12	11	13	36	37	41
Red-cock. Woodp.	44	....	5	2	3	8	....	4	....	....	21	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eastern Kingbird	1	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Cr. Flycatcher	2	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eastern Phoebe	163	2	12	7	4	10	12	1	1	2	1	3	2	4	5	7	15	5	5	4	10	....	2	8	4	3	1	10	7	16
Eastern Wood Pewee	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Horned Lark	236	....	....	....	....	....	....	....	....	....	2	141	....	....	....	....	*	....	....	*	43	8	....	42	....	....	....	....	....	....
Tree Swallow	16	....	....	15	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Blue Jay	3,517	18	65	72	72	174	235	52	25	49	173	35	151	201	259	227	159	163	312	140	88	204	23	248	34	21	5	91	150	71
Common Raven	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
Common Crow	4,478	54	146	755	183	93	238	3	15	....	13	107	24	73	139	163	267	122	398	281	62	89	30	230	156	113	25	97	469	133
Fish Crow	1,456	25	808	238	122	6	226	29	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black-cap. Chickadee	†	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	†
Carolina Chickadee	2,952	42	83	32	102	109	125	19	13	28	47	87	54	75	197	133	130	103	216	191	64	202	24	131	44	42	27	186	182	264
Tufted Titmouse	1,635	2	23	35	37	76	37	12	5	2	33	33	23	69	112	96	98	50	114	132	33	55	6	53	19	70	32	135	139	104
White-br. Nuthatch	331	....	....	....	....	1	2	1	....	....	7	1	1	20	3	17	27	20	24	40	5	....	1	6	3	16	11	46	44	35
Red-br. Nuthatch	101	10	*	....	....	1	1	....	....	....	1	....	1	1	4	3	....	5	8	3	10	....	1	1	1	2	1	5	7	35
Brown-hd. Nuthatch	413	13	15	19	28	40	19	5	....	10	58	1	2	24	11	39	25	10	22	12	9	29	1	15	6	....	....	....	....	....
Brown Creeper	166	5	3	*	1	3	....	....	....	2	15	4	....	3	16	27	9	11	16	11	9	1	....	3	4	....	....	10	6	7
House Wren	97	40	14	14	2	6	2	....	8	....	....	2	2	....	5	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....
Winter Wren	199	8	4	25	4	4	1	....	5	3	11	29	....	2	24	25	7	3	....	1	4	....	1	7	7	....	2	1	*	21
Bewick's Wren	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....
Carolina Wren	2,166	141	92	52	65	145	101	23	12	13	52	86	29	51	200	130	156	45	122	111	43	117	9	57	9	16	23	97	82	87
Long-bill. Marsh W.	116	78	6	13	4	8	3	....	3	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Short-bill. Marsh W.	298	248	26	5	1	3	14	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....
Mockingbird	1,740	61	56	60	52	48	98	35	23	27	33	32	60	39	141	98	100	41	221	110	44	125	20	92	14	17	9	47	27	10
Gray Catbird	208	155	13	4	3	2	11	....	1	4	6	2	1	2	1	....	....	....	....	*	1	....	....	2	....	....	....	....	....	....
Brown Thrasher	338	17	27	28	10	28	26	12	3	5	22	10	11	22	13	12	9	11	14	1	2	10	3	30	2	2	....	2	4	2
American Robin	21,734	5,560	650	502	138	79	339	3	640	235	140	9,595	24	175	1,632	40	650	44	17	533	77	267	8	48	4	9	16	130	67	112
Wood Thrush	2	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hermit Thrush	158	6	6	8	5	9	7	....	3	2	23	9	5	11	7	12	23	....	....	3	....	....	....	6	2	1	1	....	3	6

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	Total Individuals	Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 22 December	Wilmington, N.C. 14 December	Litchfield-Pawleys Is., S.C., 28 December	Charleston, S.C. 29 December	Hilton Head Is., S.C. 28 December	Beaufort Co., N.C. 29 December	Pamlico Co., N.C. 26 December	Dillon, S.C. 31 December	Southern Pines, N.C. 16 December	Roanoke Rapids, N.C. 18 December	Columbia, S.C. 14 December	Aiken, S.C. 22 December	Raleigh, N.C. 21 December	Durham, N.C. 15 December	Chapel Hill, N.C. 22 December	Rockingham Co., N.C. 15 December	Greensboro, N.C. 28 December	Winston-Salem, N.C. 28 December	Iredell Co., N.C. 29 December	Charlotte, N.C. 28 December	Greenville, S.C. 28 December	Clemson, S.C. 14 December	Elkin-Ronda, N.C. 26 December	Caldwell Co., N.C. 30 December	Tryon, N.C. 30 December	Buncombe Co., N.C. 14 December	Brevard, N.C. 28 December	G.S.M.N.P. 29 December
Eastern Bluebird	1,080	....	19	10	34	1	64	18	11	10	89	18	3	31	37	83	113	90	51	34	79	22	4	71	24	15	23	32	61	33
Bl.-gr. Gnatcatcher	26	....	1	3	7	14	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Golden-cr. Kinglet	2,206	16	27	24	48	111	....	12	3	9	279	103	2	32	297	122	166	53	219	95	142	43	2	76	23	....	....	90	26	186
Ruby-cr. Kinglet	2,890	30	48	71	298	418	73	14	13	30	116	161	57	200	204	123	96	37	164	197	141	58	20	166	15	16	17	17	59	31
Water Pipit	682	....	25	85	....	....	9	15	106	....	157	9	11	....	58	47	78	....	....	12	....	26	....	44	....	....	....	....	....	....
Cedar Waxwing	1,784	48	7	41	16	24	256	....	....	17	192	85	21	200	296	90	108	55	10	45	6	26	6	67	45	....	....	1	....	122
Loggerhead Shrike	237	....	10	4	2	4	19	....	1	....	22	1	7	11	30	14	9	12	9	5	25	30	4	11	....	2	3	....	2	....
Starling	240,221	390	884	1,587	182	28	118	144	154	134	2,412	528	909	316	13,355	1,369	2,936	997	8,728	200,590	1,167	1,818	43	397	91	139	**	383	256	166
White-eyed Vireo	11	....	1	2	....	6	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Solitary Vireo	29	....	3	5	2	11	4	....	....	1	1	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black-and-white W.	11	....	....	....	....	10	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Prothonotary Warbler	1	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Orange-crowned W.	13	3	3	1	2	1	1	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
Northern Parula	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Yellow-rumped W.	24,224	17,100	1,832	860	828	559	1,156	173	549	62	24	52	36	25	256	147	101	12	109	103	41	74	3	64	34	1	3	9	....	11
Yellow-throated W.	9	....	....	1	1	4	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pine Warbler	478	9	2	15	15	224	63	3	2	7	11	2	1	36	10	13	16	2	1	17	....	1	....	24	....	....	....	3	....	1
Prairie Warbler	30	....	....	....	1	29	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Palm Warbler	72	3	11	*	2	3	27	1	....	3	1	3	....	9	1	1	....	....	1	*	....	1	....	5	....	....	....	....	....	....
Com. Yellowthroat	133	36	10	13	6	31	15	....	3	....	5	1	....	3	5	....	....	....	....	1	....	....	....	4	....	....	....	....	....	....
Yellow-br. Chat	4	1	1	....	....	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wilson's Warbler	1	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
House Sparrow	5,665	59	114	99	47	10	139	83	24	113	61	100	141	42	1,856	275	76	311	551	532	167	244	6	66	107	111	34	108	102	87
E. Meadowlark	5,061	313	165	179	46	121	575	8	14	97	24	354	179	29	186	251	243	133	132	247	156	338	40	776	50	44	34	41	263	23
Red-wg. Blackbird	17,716	1,200	1,025	2,212	305	743	1,474	1,352	637	409	101	650	431	513	567	2,612	988	75	779	75	....	323	100	1,136	....	....	**	2	4	3
Northern Oriole	124	....	16	6	....	....	....	34	....	1	25	7	....	....	20	9	4	....	....	2	....	*	....	....	....	....	....	....	....	....
Rusty Blackbird	16,026	....	4	18	....	....	81	....	29	1	32	120	1	20	22	146	31	....	7	15,106	....	137	6	154	2	....	**	9	100	....
Blackbird (sp. ?)	615,150	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	554,500	....	....	....	....	....	....	....	....	....	60,650	....	....	....
Boat-tailed Grackle	2,688	838	366	321	326	97	700	....	40	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Common Grackle	320,534	92	212	337	55	141	545	118	7	285	3,805	1,900	91	41	218	206	2,861	16	3,068	303,876	51	393	2	2,181	....	5	**	1	27	....
Brown-hd. Cowbird	11,130	20	40	2	....	....	10	....	10	....	1	22	28	144	18	437	61	50	273	9,502	33	311	1	167	....	....	**	....	....	....
Western Tanager	*	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cardinal	5,184	78	101	87	180	374	633	45	21	69	129	221	180	68	408	268	333	198	384	238	123	237	20	124	85	104	41	87	211	137
Evening Grosbeak	453	3	....	....	....	1	....	....	....	....	6	2	1	1	52	30	64	*	....	....	....	6	....	1	....	....	....	9	....	277
Purple Finch	2,124	52	54	100	18	11	....	14	4	10	30	57	27	10	313	207	151	60	299	155	17	87	6	82	42	71	16	63	89	79
House Finch	143	....	....	....	....	....	....	....	....	....	....	6	....	....	41	34	....	17	1	19	....	6	....	5	....	14	....	....	....	....
Pine Siskin	129	....	....	....	....	....	1	....	....	....	....	....	....	....	30	14	3	9	27	2	12	....	....	4	7	1	1	8	....	10
Am. Goldfinch	2,934	305	240	75	70	91	190	15	25	51	125	38	38	58	242	154	210	63	152	127	93	7	56	149	17	13	10	134	90	96
Red Crossbill	45	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	44
Ruf.-sided Towhee	2,299	160	112	58	91	363	89	22	12	22	105	46	87	84	155	90	110	28	86	74	41	127	24	86	17	67	16	30	65	32
Savannah Sparrow	1,638	370	131	271	44	3	154	2	24	11	55	132	7	15	156	43	50	*	9	14	....	23	....	123	....	....	1	*	....	....
Grasshopper Sp.	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....

CHRISTMAS BIRD COUNT 1974	Total Individuals	COAST						COASTAL PLAIN							PIEDMONT												MOUNTAINS			
		Bodie-Pea Island, N.C. 30 December	Morehead City, N.C. 22 December	Wilmington, N.C. 14 December	Litchfield-Pawleys Is., S.C., 28 December	Charleston, S.C. 29 December	Hilton Head Is., S.C. 28 December	Beaufort Co., N.C. 29 December	Pamlico Co., N.C. 26 December	Dillon, S.C. 31 December	Southern Pines, N.C. 16 December	Roanoke Rapids, N.C. 18 December	Columbia, S.C. 14 December	Aiken, S.C. 22 December	Raleigh, N.C. 21 December	Durham, N.C. 15 December	Chapel Hill, N.C. 22 December	Rockingham Co., N.C. 15 December	Greensboro, N.C. 28 December	Winston-Salem, N.C. 28 December	Iredell Co., N.C. 29 December	Charlotte, N.C. 28 December	Greenville, S.C. 28 December	Clemson, S.C. 14 December	Elkin-Ronda, N.C. 26 December	Caldwell Co., N.C. 30 December	Tryon, N.C. 30 December	Buncombe Co., N.C. 14 December	Brevard, N.C. 28 December	G.S.M.N.P. 29 December
Le Conte's Sparrow	4	2	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Henslow's Sparrow	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sharp-tailed Sp.	279	81	11	177	8	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Seaside Sparrow	385	17	6	330	4	12	16	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Vesper Sparrow	130	1	....	7	....	3	73	....	....	....	....	....	....	9	....	....	....	....	....	....	....	2	1	34	....	....	....	....	....	....
Lark Sparrow	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Bachman's Sparrow	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dark-eyed Junco	11,823	17	104	90	349	45	33	180	56	182	778	1,039	64	154	997	1,100	720	889	1,485	893	314	325	311	514	148	59	84	222	514	157
Tree Sparrow	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	*	....	....	....	....	....	....	....	*	....	....
Chipping Sparrow	298	....	34	5	47	19	45	6	....	1	35	....	4	22	54	1	6	3	....	2	....	3	....	11	....	....	....	....	....	....
Field Sparrow	3,005	75	78	38	150	81	88	5	40	34	153	257	15	128	148	158	115	50	156	173	48	411	32	378	2	5	30	58	35	64
White-cr. Sparrow	279	....	....	....	....	....	1	....	....	....	....	31	....	13	32	....	14	....	34	10	....	....	....	106	4	....	....	2	32	....
White-th. Sparrow	14,764	66	233	451	415	644	338	74	64	169	310	3,357	659	282	1,539	1,120	1,500	289	819	395	202	211	48	572	259	94	61	107	233	253
Fox Sparrow	239	3	8	7	1	61	2	....	....	5	48	11	4	11	6	13	25	....	3	4	4	1	....	12	....	....	....	2	5	3
Swamp Sparrow	2,084	483	217	168	28	143	23	....	34	15	119	341	5	9	122	20	152	*	24	16	2	12	....	144	....	....	1	....	6	....
Song Sparrow	6,783	246	225	275	67	538	69	18	64	117	177	921	21	63	626	239	731	92	291	318	146	190	7	723	8	14	30	99	289	179
Lapland Longspur	6	....	....	....	....	....	....	....	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
White-th. Sp. x Junco	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Total no. species	221	150	150	155	142	151	152	70	71	61	84	92	73	77	101	76	74	65	75	81	66	77	58	98	52	43	51	62	55	51
Total no. individuals††	1,518,420	103,911	18,218	21,991	10,282	19,134	16,573	4,419	3,797	2,469	10,782	28,427	4,062	3,821	28,709	12,621	569,000	4,720	20,543	536,670	3,971	7,618	1,060	10,548	2,154	1,241	61,365	2,903	4,327	3,084
Field observers	582	36	15	29	20	40	46	8	13	4	9	5	11	7	33	37	24	22	30	33	12	19	11	11	5	11	12	13	43	23
Yard observers	124	0	8	0	0	0	3	0	1	3	5	3	2	4	7	2	6	13	3	3	4	1	1	0	7	16	5	14	11	2
Field parties	218	10	8	10	9	10	13	4	5	2	7	4	4	5	14	12	11	7	9	14	4	8	4	7	3	4	3	6	10	11
Field-hours	1,666	160	78	119	39	77	....	35	45	11	54	36	31	41	100	78	67	47	87	85	31	57	34	72	36	44	24	44	51	83
Field-miles by foot	982	179	38	65.5	26	43	....	9	10	5	29	27	26	22	70	53	49	29	29	55	14	20	15	46	14	15	4	21.5	24	44
Field-miles by car, boat	4,761	152	217	230	95	236	....	144	180	58	169	70	70	137	153	345	208	258	365	41	110	242	50	444	25	110	117	161	109	265

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*Seen in count area during count period but not on count day.
**Included in Blackbird (sp. ?.).
†Figure below includes some Black-capped Chickadees.
††Does not include counts published in paragraph form.

CHRISTMAS BIRD COUNT—1974

HARRY E. LeGRAND JR.

Birders in the Carolinas tallied 221 species on the 1974 Christmas Bird Count, well below the record 230 species in 1972 (before the lumping of several species) but an improvement over the 215 species reported last year. A notable improvement this year was that 31 counts were submitted to *The Chat*, a record high for the Carolina Bird Club Christmas Count. New or renewed counts were taken at Rockingham County and Tryon in North Carolina and Clemson in South Carolina.

Five of the six coastal counts broke 150 species this year, with Wilmington leading all counts with 155. However, the plaudits of the 1974 count must go to the observers on the Raleigh and Clemson counts. Raleigh, with 101 species, became the first count wholly west of the Fall Line to record at least 100 species, despite considerable fog and intermittent rain in the morning. Clemson took its first Christmas count since 1961 and tallied a remarkable 98 species. Surprisingly, only three other inland counts were able to break 80 species.

A total of 1,518,000+ birds were reported on the 1974 count, the lowest number of individuals on a Christmas count since 1970. As usual, most of these birds were Starlings and blackbirds; and because these species winter in large flocks that often shift roosts from one location to another between winters, the rather "low" total number of individuals probably was due to the shifting of major roosts to the outside of count circles where they were present in previous winters. Chapel Hill and Winston-Salem were locations of major roosts, and each count tallied in the vicinity of 550,000 birds.

Temperatures during the count period were somewhat above normal, as most counts had highs reading in the 50s and 60s. On the other hand, a majority of the counts (especially those in the piedmont) were plagued by intermittent rain, drizzle, and/or fog. Most of the counts held from 27 through 29 December were hampered by inclement weather.

Many rarities were sighted on the 31 counts this year. Although no first state records were reported, the *Eared Grebe* at Raleigh (first inland record for North Carolina), *White-rumped Sandpiper* at Litchfield-Pawleys Island, *Wilson's Warbler* at Charleston, two *Le Conte's Sparrows* at Bodie-Pea Island, and *White-winged Dove* and *Prothonotary Warbler* at Hilton Head Island were exceptionally noteworthy. The White-rumped Sandpiper and White-winged Dove are additions to the All-time Christmas Bird Count List, bringing the total to 279 species found on count days. Other exciting records were single *Long-billed Curlews* at Bodie-Pea Island and Morehead City, a *Glaucous Gull* at Litchfield-Pawleys Island, a *Ruffed Grouse* and two *Yellow-billed Cuckoos* at Rockingham County, two *Short-eared Owls* at Roanoke Rapids, an *Eastern Kingbird* at Beaufort County, and a *Lark Sparrow* at Morehead City. Please see the Compilers' Comments section for further information on these and other sightings.

Two major trends are evident on this count. First, nearly all of the rarities were late-lingering summer resident or transient species. Far northern visitors, such as several species of gulls, alcids, owls, and winter finches, were scarce on the count. Second, the irregularly-occurring winter finches (*Evening Grosbeak*, *Pine Siskin*, and *Red Crossbill*) all had off-years in the South this winter, as did the *Red-breasted Nuthatch*. In the previous few winters, at least one of these four species had a major invasion during a given winter. Fortunately, *Purple Finches* were common as usual at most localities.

SPECIAL NOTICES TO COMPILERS AND OBSERVERS

1. A question about the identification of Semipalmated and Western Sandpipers on Christmas counts was brought up by Allan R. Phillips in *Birding*, Vol. 6, p. 172-173.

He states that he knows of no valid record (specimen) of the Semipalmated Sandpiper north of Florida between 10 December and 1 March, and that all of the specimens labeled Semipalmated Sandpipers are actually Westerns. Also, a specimen taken from a small flock of birds originally called Semis on this year's Bodie-Pea Island count was later identified as a Western, according to Paul Sykes. Despite these facts, coastal Christmas counts north of Florida consistently report Semis, often in much greater numbers than Westerns. Based on such information and my own field experience, I am certain that Semis do winter regularly north of Florida but are apparently outnumbered by the Westerns. I do not intend to throw out all records of Semis on Carolina Christmas counts; rather, the purpose of this notice is to make observers and compilers take a closer and longer look at small "peep" sandpipers recorded on their counts. In the future, observers should no longer assume that some of the birds in a flock of "peep" *must* be Semis. Try to see the short, straight, and fairly thick bill, and the absence of rusty on the scapulars of the Semi. Also, listen for a *krip* call note (an "i" or "ĕ" sound, as opposed to the "e͞e" sound of the Western's call) before you mark the Semi on your Christmas count list.

2. Most compilers and observers correctly followed the new count policies printed in the September 1974 *Chat*, and it was encouraging to see compilers sending one to three pages of details with their count forms. However, as expected, a few problems did arise. Some observers and compilers did not send full and convincing details on rare species. Even though a number of details for a single observation were over one-half page long, some of these did not even mention field marks, *by far* the major criterion for judging the validity of a sighting. I reluctantly accepted a number of records of birds with less than convincing details. All of these had details of some kind, but the field marks (if mentioned) were too brief to thoroughly convince me of the record's validity. Only two records were rejected, due to a total lack of details—a *Yellow-billed Cuckoo* at one location and 5 *Common Terns* at another. A second reason for my insistence upon full details is to reduce my having to send out postcards to observers and compilers requesting further details, a process that delays the publication of the count by at least 3 weeks.

3. I would like to thank the observers and especially the compilers for their efforts on the 1974 Christmas count. As mentioned earlier, a record 31 counts were received, with 29 published in the table and the North Wilkesboro and Avery County counts printed under the Compilers' Comments. Being a compiler must be one of the most thankless and unappreciated jobs anyone could ever undertake. Perhaps to many people, all a compiler does is add up the species totals and submit them for publication in a journal. Actually, compiling the list is the easy part—organizing the count beforehand and requesting and typing details afterwards are the difficult jobs, not to mention the collection of participation fees and listing of observers' addresses required by *American Birds*. Also, the compiler usually is the person a count editor embarrasses or irritates by questioning a sighting. For these reasons and more, I praise the efforts of the compilers for putting so much of their time, energy, and money into making this count a success.

COMPILERS' COMMENTS

COAST

BODIE-PEA ISLAND, N.C. (center: 2.7 miles SSE of Bodie Island Lighthouse).

30 December. The three *Brown Pelicans* were in the Oregon Inlet area, and the *Green Heron* was near the Bodie Island Lighthouse pond. The adult and immature *White Ibis*, along with the 25 *Glossy Ibis*, were observed by Wayne Irvin, Paul Spain, and the Compiler near South Pond on Pea Island. The brown-plumaged *Common Eider* (Compiler and party) was seen in the surf on Pea Island. Light phase *Rough-legged Hawk* (Robert Kennedy, Robert Tripican) was seen well on Pea Island. The

large size and long decurved bill of the *Long-billed Curlew* (Richard Rowlett, Bonnie Bowen, Kennedy, Tripican) were noted; bird was on flats just north of North Pond on Pea Island. The same four observers also found the *Marbled Godwits.* The *Parasitic Jaeger* (Wavell Fogleman) was chasing gulls 200 yards off Bodie Island; the pointed rectrices were seen. The adult and seven immature *Black-legged Kittiwakes* (Robert Ake) were seen well offshore. Two parties observed the four *Common Terns,* noting the black band extending completely around the back of the head. *Red Crossbill* (Richard Peake) was seen and heard in flight near Bodie Island Lighthouse. The two *Le Conte's Sparrows* (Ray Chandler, Paul McQuarry) were studied carefully in a grassy sedge marsh with scattered waxmyrtle north of the Bodie Island Lighthouse; white median crown stripe, purplish color of the nape, orange face wash, and fine streaks on the sides of the breast were seen. Interestingly, the *Common Eider, Rough-legged Hawk, Long-billed Curlew,* and *Le Conte's Sparrow* had been seen several weeks earlier in the area. Outstanding species counts were 2100 *Gannets,* 13,600 *Red-breasted Mergansers,* 62 *Ring-necked Pheasants,* 39 *Piping Plovers,* 101 *American Avocets,* 248 *Short-billed Marsh Wrens,* and 17,000 *Yellow-rumped Warblers.*—PAUL W. SYKES JR., P.O. Box 2077, Delray Beach, Florida 33444.

MOREHEAD CITY, N.C. (center: 0.7 miles NW of Crab Point).

22 December. A female *Common Merganser* (Compiler) was seen on a small pond on 19 December. The *Long-billed Curlew* (Compiler, Edmund LeGrand) was on flats in Beaufort Inlet and compared with nearby *Marbled Godwits. Whip-poor-will* (LeGrand, Chris Marsh, Lisa Marsh, David Whitehurst) was attracted to a taped call just before dawn at Pine Knoll Shores; a number of records for this area over the past few winters indicates that the species may winter regularly in Carteret County. Both the *Blue-gray Gnatcatcher* (Ray Winstead) and the *White-eyed Vireo* (Compiler) were seen at very close range. The *Lark Sparrow* (John Wright, Tom Howard), seen near Newport, was identified by the white tail edging, chestnut crown, black face markings, and breast spot. The seven unidentified *scoters* were either *Surfs* or *Blacks* and were counted in the species total.—JOHN FUSSELL III, Box 520, Morehead City, N.C. 28557.

WILMINGTON, N.C. (center: Monkey Junction).

14 December. *Rough-legged Hawk* (Edna Appleberry, Harry Latimer, Greg Massey) was a light phase bird studied carefully near the New Cape Fear Bridge. The same observers found the *Spotted Sandpiper.* One *Sandwich Tern* was seen by the Compiler and Doug Nunnally, and two were seen by James Parnell. The *Northern Parula* (C. Willard Greene) was at Orton with a mixed flock of songbirds; all field marks were seen. The large numbers of *Seaside* and *Sharp-tailed Sparrows* were partly due to greater marsh coverage by observers and partly to high tides on Masonboro Island, where 325 birds were found.—FRANCES B. NEEDHAM, Box 81, Wilmington, N.C. 28401.

LITCHFIELD-PAWLEYS ISLAND, S.C. (center: entrance to North Litchfield Beach on US 17).

28 December. The *White-rumped Sandpiper* (Compiler, Evelyn Dabbs, David McLean Jr.) was excellently described in detail; white rump, dark legs, mottled breast, whitish stripe over eye, size about that of a *Sanderling. Glaucous Gull* (Arch McCallum, Wenda McCallum) was seen in the surf with other gulls and was identified by size (as large as or slightly larger than *Great Black-backed Gulls*), large and dark-tipped bill, and overall dusky-white appearance. The *Whip-poor-will* (Arch McCallum) was flushed from an oak-pine scrub. Pete Laurie observed the *Prairie Warbler* and the two *Le Conte's Sparrows.*—FREDERICK PROBST, Route 2, Box 80-C2, Pawleys Island, S.C. 29585.

CHARLESTON, S.C. (center: 14 miles NE of Mt. Pleasant and 0.5 mile E of US 17).

29 December. Weather conditions and visibility were poor. Three boat parties provided better coverage of the upper Wando River and tidal creeks, tidal marshes,

and mudflats. Such coverage was partly responsible for the high counts of *scaup*, *oystercatchers*, *dowitchers*, *godwits*, and *wigeons*. More *kinglets* were found on the mainland than usual. Rare species were a *Gull-billed Tern* (Arthur Wilcox, Peter Manigault, and party), a *Yellow-breasted Chat* (Manigault), and a *Wilson's Warbler* (Perry Nugent, Arch McCallum). The *Wilson's* was observed for about 5 minutes at close range and was reported in full detail; major marks noted were the olive back, bright yellow underparts, absence of tail spots, pale olive cheek patch, yellow eye ring and stripe over the eye, a blackish-olive crown, and size of *Common Yellowthroat*. The remarkable 29 *Prairie Warblers* were seen and well documented by Perry Nugent and party. The birds were in large flocks of *Yellow-rumped*, *Pine*, and *Yellow-throated Warblers*, mainly in small to medium loblolly pines with some underbrush. The black and yellow stripes around the eye, dark side streaks, and wagging tail were noted.—JULIAN R. HARRISON, Biology Department, College of Charleston, Charleston, S.C. 29401.

HILTON HEAD ISLAND, S.C. (center: Spanish Wells Landing).

28 December. The *Red-necked Grebes* (Seward Bowers) were seen in Baynard Cove at 75 feet. The *White-winged Dove* (Caroline Newhall, Frank Arnold) was seen perching and in flight; six were seen during the count period. The two observers also found the *Great Crested Flycatcher;* rufous tail was seen. Mildred Lawrence saw the *Eastern Wood Pewee* in a wooded yard, perched in a tree and noted the wing bars, light bill, and lack of tail wagging. The orange-yellow head and breast, plain bluish wings, and white belly of the *Prothonotary Warbler* were well seen by Helen Loriot and Kip Berhorst.—W. WALLACE ROY and BETTY ROY, Dogwood Lane, Hilton Head Island, S.C. 29928.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: entrance of Upper Goose Creek into Pamlico River).

29 December. The *Common Gallinule* (Compiler, Anne and Bruce Reynolds) was in a dredged marsh channel on the south shore of the Pamlico River and was apparently a first winter record for Beaufort County.—DAVID MORRIS, Camp Don-Lee, Arapahoe, N.C. 28510.

PAMLICO COUNTY, N.C. (center: in Florence at intersection of 1324 and 1329).

26 December. The count day was quite windy. The *Eastern Kingbird* (Margaret Conderman) was on a roadside wire, and all field marks, including the distinct white end of the tail, were noted. The flock of *Boat-tailed Grackles* (Compiler) was in a corn field near Whortonsville.—DAVID MORRIS, address as above.

DILLON COUNTY, S.C. (center: Dillon).

31 December.—JOHN H. WILSON, Box 535, Dillon, S.C. 29536.

SOUTHERN PINES, N.C. (center: 1 mile NE of Skyline).

16 December. The *Common Loon* (Chris Marsh) was seen at close range on Lake Surf. *Herring Gulls* (Marsh, John Wright, Edmund LeGrand) were a mixed flock of adults and immatures at Lake Surf. John Fussell observed all field marks of the *Solitary Vireo.*—J.H. CARTER III, P.O. Box 891, Southern Pines, N.C. 28387.

ROANOKE RAPIDS, N.C. (center: 1.4 miles SE of Weldon).

18 December. The *American Bittern* (Chris Marsh, Rhodes Robinson) was flushed from the marshy edge of a beaver pond. An adult *Snow (Blue) Goose* was observed by the Compiler in a large flock of *Canada Geese* on Stevenson's Goose Pond. The two *Short-eared Owls* were discovered by Marsh and Robinson in a wet cattle pasture at Occoneechee Neck. The birds were observed at close range in flight and resting on

the ground by all count observers; the excellent details included all field marks. *White-crowned Sparrows* continue to increase in numbers on the Christmas counts. *Lapland Longspurs* have been seen for four consecutive winters in a limited area of Occoneechee Neck, and the species is now considered a regular winter resident in this locality.—J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

COLUMBIA, S.C. (center: intersection of Gills Creek and Bluff Road).

14 December. The *American Bittern* (Kay Sisson, Miriam Davis, Ebba Van, Emma Walker) was approached within 10 feet; black neck mark was seen. The two *Wood Thrushes* (Glenn Smith) had a reddish head and nape and duller back and tail. The *Blue-gray Gnatcatcher* (Compiler, Nina and Mary Reid) was studied at close range in excellent light. Most of the *Red-headed Woodpeckers* were seen in a few acres of river swamp, and over half were immatures.—GILBERT BRISTOW, 2921 Blossom Street, Columbia, S.C. 29205.

AIKEN, S.C. (center: Couchton).

22 December.—JEANNINE ANGERMAN, 1326 Evans Road, Aiken, S.C. 29801.

PIEDMONT

RALEIGH, N.C. (center: Norfolk Southern RR crossing on Lake Wheeler Road).

21 December. The outstanding find was an *Eared Grebe* on Lake Benson, first seen by the Compiler and party and subsequently seen by many other observers; all field marks were noted and described in detail. The female *Northern Shoveler* (Chris Marsh) was on Lake Wheeler, and the male *Common Goldeneye* (Ken Knapp, Betty and Lloyd Davis) was on Lake Benson. Fifteen *Red-breasted Mergansers* on Lake Wheeler and 39 on Lake Benson were an exceptional number for the winter season. Harry LeGrand found the *Virginia Rails* and the *Sora* in a cattail marsh near Lake Raleigh. The adult and immature *Herring Gulls* (Marsh) were with a *Ring-billed Gull* on Lake Wheeler. Singing *Solitary Vireos* were found by two parties. The *Yellow-breasted Chat* (Marsh and party) was well studied and all field marks were noted. An immature *Black-crowned Night Heron* during count period was unusual.—R.J. HADER, 3313 Cheswick Drive, Raleigh, N.C. 27609.

DURHAM, N.C. (center: 1 mile N and 1 mile E of junction of Eno River and US 501).

15 December. The Compiler and Robert Ridgely observed a hybrid *Dark-eyed Junco* x *White-throated Sparrow* that had regularly visited a feeder for two weeks prior to the count. It had the gray head, pink bill, white belly, and white outer tail feathers of a *junco* combined with the brown back and wing, dark head striping, and white throat of the *White-throated Sparrow*. Since the markings were quite distinct, they believe the bird probably was an adult.—NORMAN BUDNITZ, Dept. of Zoology, Duke University, Durham, N.C. 27706.

CHAPEL HILL, N.C. (center: intersection of Franklin and Columbia Streets).

22 December. With no lingerers and a lackluster performance by winter finches, the count was just typical, but with a good list of the expected winter species. For waterfowl-poor Chapel Hill, the six *Canvasbacks* were quite unusual, and the *Bufflehead* was the first for count day (both by Barbara Roth, later by other observers). The half-million-plus total of blackbirds was a useful addition to the count, even though most were unidentified as to species.—JAMES O. PULLMAN, Route 6, Box 149, Chapel Hill, N.C. 27514.

ROCKINGHAM COUNTY, N.C. (center: Rockingham County Community College Student Center in Wentworth).

15 December. The *Ruffed Grouse* was seen by Donna Cook, who saw the large size and broad banded tail. In fact, she has seen grouse in the same area for many

years, including a hen with chicks a few years ago. [Cook should write a field note for *Chat* on her *Ruffed Grouse* observations in Rockingham County, for these records are well to the east of the normal range of the species.—HL] Donna Cook also observed the two *Yellow-billed Cuckoos* as they were feeding on caterpillars that were trapped under burlap wrapped around the trunks of apple trees in her yard. The large spots on the underside of the tail were easily seen at 40 feet.—EDWARD BURROUGHS, 921 Seymour Court, Eden, N.C. 27288.

GREENSBORO, N.C. (center: transmitter of Radio Station WBIG).
28 December. The *Palm Warbler* was seen by Edwin Blitch III.—DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N.C. 27408.

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Parkway).
28 December. There is a notable scarcity of waterfowl in the area. *Black* and *Turkey Vultures* were seen in a common roost near Lewisville. The *Long-billed Marsh Wren* (James Orgain) was found in a marsh at the Nature Science Park; it had been seen by other birders in the area for several weeks.—C. ROYCE HOUGH, 713 Lankashire Road, Winston-Salem, N.C. 27106.

IREDELL COUNTY, N.C. (center: South Yadkin River Bridge on Chipley Ford Road).
29 December. The *Broad-winged Hawk* was seen by Lois Goforth on her farm. She has observed the species there all year, as has the Compiler, who has also seen this species in winter near a museum on the northern edge of Statesville. The singing *Short-billed Marsh Wren* was heard by Mrs. Goforth, who is familiar with the song of this species. An unusually large number of *kinglets* were recorded on the count. Rain, heavy at times, continued most of the day and probably was responsible for the lack of numbers and species of hawks usually seen on the count.—JANE S. MULLEN, 908 West Front Street, Statesville, N.C. 28677.

CHARLOTTE, N.C. (center: intersection of South Boulevard and Woodlawn Road).
28 December. The 31 *Red-tailed Hawks* were a noteworthy number for this area. The *Merlin* (David Wright) seen in the count week was the second reported for Mecklenburg County. Other than the six *House Finches* at a feeder on count day, none have been reported this year. The *Vesper Sparrow* (Doug Pratt) was a noteworthy sighting, as it is seldom seen in winter.—BECKY and JOE NORWOOD, 1329 Goodwin Avenue, Charlotte, N.C. 28205.

GREENVILLE COUNTY, S.C. (center: intersection of highways 29 and 291).
28 December.—ROSA LEE HARDIN, Star Route, Cleveland, S.C. 29635.

CLEMSON, S.C. (center: 3 miles W of intersection of US 76 and SC 28 in Pendleton).
14 December. *American Bittern* (Compiler) was heard calling from a marsh near Pendleton. Adair Tedards and Vivian Smith observed the dark phase *Rough-legged Hawk* and the *Osprey*. The large expanses of mudflats around Lake Hartwell were responsible for the lingering *Spotted Sandpiper* (Charlie Gage, Gaston Gage), *Least Sandpipers* (Bill Alexander, Frank Moore), and *Dunlins* (Edwin Stearns). The two *Bewick's Wrens* (Sidney Gauthreaux, Alan Peltz) were in brush piles near old barns in the Townville area; all field marks seen as close as 10 feet. *Catbirds* (two parties) were probably late stragglers rather than winter residents. The three male and two female *House Finches* (Tedards, Smith) were in rural country on telephone wires near Sandy Springs, at the same location where the Compiler found them in late November. Gauthreaux observed the *Grasshopper Sparrow* at very close range in a roadside brushy thicket.—HARRY E. LeGRAND JR., Department of Zoology, Clemson University, Clemson, S.C. 29631.

ELKIN-RONDA, N.C. (center: 3 miles N of Elkin at intersection of US 21 and US 21 Bypass).

26 December. Two *Rusty Blackbirds* were unusual on the count, though the species should not be as rare here as our observations indicate.—LIN HENDREN, P.O. Box 148, Elkin, N.C. 28621.

NORTH WILKESBORO, N.C. (center: North Wilkesboro).

1 January. Ring-necked Duck 4, Sharp-shinned Hawk 1, Ring-billed Gull 4, Mourning Dove 4, Great Horned Owl 1, Common Flicker 1, Pileated Woodpecker 1, Blue Jay 11, Common Crow 36, Tufted Titmouse 9, White-breasted Nuthatch 1, Winter Wren 1, Carolina Wren 7, American Robin 1, Hermit Thrush 3, Starling 59, House Sparrow 14, Rusty Blackbird 1, Cardinal 2, *House Finch* 2, Rufous-sided Towhee 2, Savannah Sparrow 1, Dark-eyed Junco 8, Song Sparrow 6. 24 species; 174 individuals; 2 field observers in 1 party; 9 field-hours; 12 miles by foot; 30 miles by car. Louise P. Smith, Wendell P. Smith. [This count badly needs additional observers. Surely someone can give the Smiths a helping hand!—HL]—WENDELL P. SMITH, 911 E Street, North Wilkesboro, N.C. 28659.

CALDWELL COUNTY, N.C. (center: Lenoir).

30 December.—HELEN MYERS, 310 Beall Street NW, Lenoir, N.C. 28645.

MOUNTAINS

TRYON, N.C. (center: Tryon).

30 December. A large blackbird roost was present along Howard Gap Road near Tryon. Neil and Margaret Skelton censused the roost on the afternoon of 5 January. The count of 60,650 included *Starlings*, *Red-winged Blackbirds*, *Rusty Blackbirds*, *Common Grackles*, and *Brown-headed Cowbirds.*—BETTY FROST, Box 271, Tryon, N.C. 28782.

AVERY COUNTY, N.C. (center: entrance to Grandfather Mountain toll road).

27 December. Mallard 1, Ruffed Grouse 3, Belted Kingfisher 2, Pileated Woodpecker 2, Yellow-bellied Sapsucker 2, Hairy Woodpecker 2, Downy Woodpecker 10, Eastern Phoebe 1, Blue Jay 23, Common Raven 5, Common Crow 32, Carolina Chickadee 47, Tufted Titmouse 33, White-breasted Nuthatch 13, Red-breasted Nuthatch 12, Brown Creeper 1, Carolina Wren 10, American Robin 2, Eastern Bluebird 6, Golden-crowned Kinglet 17, Ruby-crowned Kinglet 4, House Sparrow 16, Cardinal 23, Evening Grosbeak 33, Purple Finch 5, Pine Siskin 3, American Goldfinch 23, Rufous-sided Towhee 6, Dark-eyed Junco 151, Field Sparrow 3, White-throated Sparrow 36, Song Sparrow 11. 32 species; 538 individuals; 7 field observers in 3 parties, plus 2 yard observers; 22.5 field-hours; 5 miles by foot; 70.5 miles by car. Nat Clement, Frank Mendoza, Hugh Morton, Margery Plymire, Russell Pratt, Sally Southerland, Louise Winstead.—MARGERY PLYMIRE, R.D. 2, Chestertown, Maryland 21620.

BUNCOMBE COUNTY, N.C. (center: intersection of US 70 and SR 2740 in Swannanoa).

14 December. The male *Canvasback* (Richard Price, Compiler, Roland Sargent, Plumer Wiseman) was with *Ring-necked Ducks* on Burnett Reservoir. *Barn Owl* (Gordon Mahy) was in a silo on the Warren Wilson College grounds in Swannanoa; birds have nested here for 2 years and have raised nine young. *Orange-crowned Warbler* (Mary Sawyer) was seen as close as 10 feet in the observer's yard. The *Rusty Blackbirds* (Margaret Finch, Eddie Stearns) were seen in the Haw Creek area. *White-crowned Sparrows* (Vertice Wood) were in the observer's yard at Lakey Gap, south of Black Mountain.—ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

BREVARD, N.C. (center: 7 miles SE of Brevard at Rich Mountain Lookout Tower).

28 December. The addition of a highly successful 16-mile canoe trip yielded Brevard's first *Horned Grebe* (Walter and Gail Holland, Harold Sims). Other new species for the count were *Marsh Hawk* (Susan and Curt Holland, Walter McKelvey) and *Canada Goose* and *Red-winged Blackbird* (both by Ercel and George Francis, Genevieve Lilly). Notably absent were *Killdeer*, *Evening Grosbeak*, and *Pine Siskin*.—WALTER C. HOLLAND JR., 290 Maple Street, Brevard, N.C. 28712.

GREAT SMOKY MOUNTAINS NATIONAL PARK, Tenn.-N.C. (center: Bull Head of Mt. Le Conte).

29 December.—DONALD H. DeFOE, Great Smoky Mountains National Park, Gatlinburg, Tennessee 37738.

FIELD OBSERVERS

BODIE-PEA ISLAND, N.C.: Robert Ake, Robert Anderson, Bonnie Bowen, Ray Chandler, John and Thelma Dalmas, Keith Fielder, Wavell Fogleman, Charles Gibson, Clay and Samuel Gifford, Joseph Hudick, David Hughes, Kent Ihrman, Wayne Irvin, Robert Kennedy, Ken Knapp, Edmund and Harry LeGrand, Merrill Lynch, Norman and Lynn Messinger, Paul McQuarry, Dwight and Richard Peake, William Portlock, Douglas Pratt, Robert and Peter Pyle, Richard Rowlett, Paul Spain, Paul Sykes Jr., Robert Tripican, John and Mark Williamson, Townley Wolfe.

MOREHEAD CITY, N.C.: Jay Carter, John Fussell II, John Fussell III, Tom Howard, Edmund LeGrand, Chris Marsh, Lisa Marsh, J.A. and Sue Meadows, David Morris, Anne and Bruce Reynolds, David Whitehurst, Ray Winstead, John Wright.

WILMINGTON, N.C.: Edna Appleberry, Alice Brown, Robert S. Brown, Jay and Dana Carter, Dot Earle, Wavell and Kim Fogleman, John Fussell, C. Willard Greene, John Hardwick, Haskell Hart, Kitty Kosh, Harry Latimer, A. Greg Massey, Richard McGough, Polly Mebane, Bud Needham, Frances Needham, Doug and Sally Nunnally, James F. Parnell, Frederick Probst, Bruce and Anne Reynolds, Barry Thomas, Charlotte Waggett, John Waggett, Jim Weigand.

LITCHFIELD-PAWLEYS ISLAND, S.C.: Jeannine Angerman, Bobby Austin, Robert Brown, Calvin Clyde, Evelyn Dabbs, Betsy Eaddy, Lindy Floyd, Julian Harrison, David Huff, Pete Laurie, Arch McCallum, Wenda McCallum, David McLean Jr., Joe McLean, Mary Lou McLean, J.A. Meadows, Sue Meadows, Perry Nugent, Frederick Probst, Renee Probst.

CHARLESTON, S.C.: Bill Anderson, S.A. Barber, Ted Beckett, Alan Bills, David Chamberlain, E.B. Chamberlain, Calvin Clyde, Evelyn Dabbs, W.P. Davis, Harry Freeman, John Gaskins, Andy Harrison, Julian Harrison, T.F. Hassell, Casey Herbert, John and Peter Horlbeck, Kenneth Hough, Bobbin and David Huff, George Kuzma, Peter Laurie, Curt Laffin, Peter Manigault, Arch and Wenda McCallum, Frank McKinney, Peg and Ted Metcalf, Perry Nugent, Robert O'Dell, Frederick and Renee Probst, Olgerts Puravs, Tom Reeves, Susan Roche, Ralph Tiner, Arthur and Robert Wilcox, William Wingfield.

HILTON HEAD ISLAND, S.C.: John Allen, Frank Arnold, Gordon Benford, Kip Berhorst, Seward Bowers, Nancy and George Cathcart, Nini Chapin, Alice Chapman, Billie Hack, Orion and Alicia Hack, John Hannold, Dave and Virginia Harrall, Royce and Helen Hough, Isabel Hurst, Charlotte and Edith Inglesby, Bruce King, Donald and Louise Lacoss, Helen Loriot, Imogene Lowden, Olin and Violet McIntosh, Marie Mellinger, Beany Newhall, Muggs Park, Helene Parry, Keith and Beryl Pitcairn, Lois Pitcairn, Wallace and Betty Roy, Stewart and Mary Smith, Elizabeth and Robert Whitney, Bill Wiley.

BEAUFORT COUNTY, N.C.: Lily Grimes, James McLaurin, Mary McLaurin, David Morris, Anne Reynolds, Bruce Reynolds, Louise Satterthwaite, Mary Wilson.

PAMLICO COUNTY, N.C.: Bill Baxter, Ken Baxter, Marguerite Baxter, Nat Baxter, Margaret Conderman, John Fussell II, John Fussell III, Ecky Meadows, Sue Meadows, David Morris, Anne Reynolds, Bruce Reynolds, Clay Smith.

DILLON COUNTY, S.C.: Arch McCallum, Marion McCallum, Wenda McCallum, John H. Wilson.

SOUTHERN PINES, N.C.: J.H. Carter III, John Fussell, Edmund LeGrand, Chris Marsh, James Parnell, John Vanderlaan, Jim Weigand, Mary Wintyen, John Wright.

ROANOKE RAPIDS, N.C.: Tom Howard, J. Merrill Lynch, Chris Marsh, Rhodes Robinson, John Wright.

COLUMBIA, S.C.: Gilbert Bristow, Miriam Davis, Bobby Despartes, Marcy Despartes, Russell Green, Nina Reed, Mary Reid, Glenn Smith, Kay Sisson, Ebba Van, Emma Walker.

AIKEN, S.C.: Jeannine Angerman, Jack Cooper, Gene Howard, Gerald Knighton, Robert Lathrop, James Reinig, Thomas Rial.

RALEIGH, N.C.: Bill Blades, Nelson Chadwick, Betty and Lloyd Davis, Jean Donaldson, Louis Fink, John Fussell, Charlotte Hilton Green, R.J. Hader, Jeanne and Ray Halsey, Tom Howard, Wayne Irvin, Ken Knapp, Joshua Lee, Edmund and Harry LeGrand, Sanford Leuba, Joe Marlin, Chris Marsh, Jim Mulholland, James Pullman, Tom Quay, Rhodes and Sarah Robinson, Elizabeth and Robert Teulings, David Whitehurst, Gail Whitehurst, Ed and Ida Lee Winkler, Ray Winstead, John Wright.

DURHAM, N.C.: Stanley Alford, Joe and Ruth Blum, Pat Boyd, Douglas Brame, Norman Budnitz, Angelo Capparella III, Carlie and Robin Carter, Oliver Ferguson, Joyce and Page Fisher, Eric and Lois Garner, Julia Grout, Bridget and Stephen Holdship, John Horn, Mark Huff, Alexander Hull, Paul Lancaster, Frank and Nancy Lerner, Kenneth Lind, Lyn Loveless, David, Jim, and Owen McConnell, David Morris, Sebastian Patti, Lance Peacock, Laura Reinertsen, Julie and Robert Ridgely, Barbara and Paul Saunders, Tim Wilder.

CHAPEL HILL, N.C.: Stanley Alford, Charles and Helen Blake, Annie Leigh Broughton, Norm Budnitz, Angelo Capparella III, Carlie and Robin Carter, Eric, Jay and Lois Garner, Gertrude London, Deane McGinnis, Monica Nees, Johnnie Payne, Jim Pullman, Barbara Roth, Lois and Michael Schultz, Elizabeth and Robert Teulings, Bill and Marg Wagner, Eleanor Wagstaff.

ROCKINGHAM COUNTY, N.C.: Carolyn and Donald Allen, Rose Avery, Carol Sue and Edward Burroughs, Charlotte Dawley, Bob Futrell, Clarence McCollum, Jean McCoy, Ida Mitchell, Edna Motley, Ruth and William Noonan, Ann, Nathan and Olivia Rich, Marie Robertson, Lucy Smith, Helen Spencer, Larry and Pete Yount, Helen Zuk.

GREENSBORO, N.C.: Carolyn Allen, Donald Allen, Rose Avery, Virginia Bell, Edwin Blitch III, Inez Coldwell, Larry Crawford Jr., Charlotte Dawley, Frank Fish, Mildred Fish, Dot Garrett, Fred Garrett, Howard Groover, Ellene Kirk, Ellen Knight, Clarence Mattocks, James Mattocks, Jean McCoy, Ida Mitchell, Elizabeth Ogburn, Emma Leah Perrett, Virginia Sewell, George Smith, Irene Smyre, Thomas Street, Marjorie Tays, William Tays, Daphne Weisner, Maude Williams, Helen Zuk.

WINSTON-SALEM, N.C.: Fran Baldwin, Zack Bynum, Mary Cage, Jim and Pat Culbertson, Charles Frost, Gardner and Margaret Gidley, Louise and Tom Gossett, John Green, Bill Hammond, Abbye Harris, Fred Hill, George and Ruth Hill, Kevin Hintsa, Bert Hollifield, Ben Hough, Royce Hough, Wayne Irvin, Janice Levitt, Ann Listokin, Sue Moore, George and Margaret Morgan, Jim Orgain, Ann Pollard, Jackie Shelton, Ramona Snavely, Paul Spain, C. Sommer, Bob Witherington.

IREDELL COUNTY, N.C.: Ronald Alexander, Sam Cathey, Rosie Flynt, Tina Flynt, Gary Gilleland, Lois Goforth, Dwayne Hayes, Larry Marlin, Bobby Mize, Dick Mize, Jane Mullen, David Perry.

CHARLOTTE, N.C.: Marge Blackett, Elizabeth and Flo Cobey, Susan Ennett, Gwen Fenninger, Lucius Gage, Ronald Gestwicki, Jack Hamilton, David Hawkins, Bobby Kluttz, Norwood Middleton, Peggy Moore, Ted Moore, Becky and Joe Norwood, Katherine and Shuford Peeler, Doug Pratt, David Wright (Mecklenburg Audubon Society).

(Continued on Page 29)

General Field Notes

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A Record of the Great White Heron from Inland South Carolina

J.H. CARTER III
Zoology Department, N.C. State University
Raleigh, N.C. 27607

TOM RIAL
791 Boardman Road, Dumbarton Oaks
Aiken, S.C. 29801

JEANNINE ANGERMAN
1326 Evans Road, Aiken, S.C. 29801

12 February 1974

On 29 September 1973, several members of the Carolina Bird Club found a Great White Heron (*Ardea herodias occidentalis*) on upper Lake Marion in extreme southern Sumter County, S.C. The bird was in an open marsh near Pack's Landing. Its large size was apparent at a great distance. Carter observed the bright yellow legs of the all white bird at a distance of approximately 150 yards with nine-power binoculars. Shortly afterwards, Rial and Angerman saw a Great Blue Heron (*A.h. herodias*) land near the white bird. They felt that the Great White Heron was as large as, or larger than, the Great Blue. They also noted the yellow legs of the Great White Heron. All of these observations were made under excellent light conditions.

There are only two published records for this subspecies in South Carolina, both for coastal localities. Single individuals were seen at Yemassee on 24 May 1943 (*South Carolina Bird Life*, Sprunt and Chamberlain, 1949, p. 78) and at Hilton Head Island on 19 September 1961 (*South Carolina Bird Life*, revised 1970, p. 581). This new record appears to be the first for inland South Carolina.

A Rare Occurrence of the Swallow-tailed Kite in Western North Carolina

WALTER S. HALL
Route 8, Box 1136, Asheville, N.C. 28806

19 June 1974

On 12 May 1974, while returning home from the Carolina Bird Club spring meeting in Hendersonville, N.C., I was driving along NC 191 in the area where the French Broad and Mill's River valleys meet. I was about 3 miles N of the Buncombe-Henderson County line when I saw two large birds I believed to be Swallow-tailed Kites (*Elanoides forficatus*), so I stopped my car.

The birds were sailing along on wind currents in a southwesterly direction at an elevation of approximately 150 to 200 feet. The solid white underbelly and head as well as black on the outer primaries of the wings and black forked tail could be seen easily as the birds passed over me. I used 7x35 and 10x50 binoculars in my observation. I am familiar with the species, having seen Swallow-tailed Kites on several occasions in Florida.

The area in which the birds were seen is a wide expanse of open farmland, interspersed with tracts of woodland, on either side of the French Broad and Mill's River. Many streams flow through the area into the rivers.

The Swallow-tailed Kite was reported from Buncombe County, N.C., during the years of 1887 to 1894 by John S. Cairns, who found it during the fall and primarily in the month of October. This is the first spring record for the species in the area and the first record for the county since 1894 (Simpson, *Chat*, 36:69-72, 1972.)

Goshawks in Avery County, N.C.

ROBERT J. HADER
North Carolina State University, Raleigh, N.C. 27607

17 June 1974

This note is a brief summary of an exchange of correspondence between William Hamnett of the North Caolina Museum of Natural History and Dartha Frank of Cranberry (Avery County), N.C. The correspondence indicates sightings of several Goshawks present in Avery County during the summer of 1971. Though Miss Frank is not an experienced observer in the usual sense, her descriptions are most convincing and, it seems to me, worth including in the published record.

In early June of 1971 Mr. Hamnett received a letter from Miss Frank in which she described several huge "silver eagles." "One flew down off the mountain in back of this old company mining store and caught two blackbirds in the air and then another day we watched one fly around for about ten minutes and caught some pigeons."

Mr. Hamnett wrote back suggesting that the "silver eagles" might be Goshawks. In a second letter, apparently before mid-June, Miss Frank related that while she was hoeing in her garden "right over my head out of the mountains here came one large four foot bird (incredible speed) with two smaller ones a little under it. The smaller (about as a hawk) ones are lighter and almost white underneath. The large mature bird has a white streak right above its sharp yellowish eyes ... caught two pigeons in mid-air without lighting at all, one in each fast, swift claw." In the same letter she included an excellent pencil sketch with detailed description of the plumage. The sketch and description is unquestionably that of a Goshawk.

Following her second letter, Mr. Hamnett sent a circular with color pictures of the hawks of Eastern North America. Miss Frank showed the circular to some 30 people who had seen the birds and all identified them as Goshawks. "The area covered was from Cranberry to Crossnore to Banner Elk to Roan Mt., Tenn., and then to Erwin. Tenn., and back to Spruce Pine, N.C." She had again seen an adult and one young bird hunting pigeons. "The mature bird caught one instantly, the young one caught one on the second try. They don't dive, they have speed enough without."

Finally in mid-August Miss Frank reported that "there are now six of them in the area. They extend as far as Knoxville, Tenn., Bakersville, N.C., Mt. Airy, N.C. and as far again as Bristol, Tenn."

In June of 1972, I visited Cranberry and talked with Miss Frank for about an hour. She confirmed the details of her letters and reported that the birds had not been seen in 1972. I came away fully convinced that her report of Goshawk sightings the previous summer was genuine. Her account carried the suggestion of possible breeding in the area though, of course, is certainly not conclusive in this respect.

Of the three previous published records of Goshawks in North Carolina, one was seen in December 1972 near Chapel Hill (*Chat*, 37:106); one in March 1970 at Franklin (*Chat*, 34:79); and one or more in June 1970 in the Great Smoky Mountains National Park (*Chat*, 35:1-4).

[While reports such as this always leave room for question, it is an excellent account of how, with patience and persistence, records from people who are not active "birders" may be verified. This report should stimulate further field work in Avery County.—DEPT. ED.]

Sandhill Cranes in Western North Carolina

W. DAVID CHAMBERLAIN
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1 April 1974

On 22 March 1974 John Lively, of the North Carolina Department of Forestry, and I were checking timber for stand reforestation on Nantahala Park Property. About 12:45 we were driving through Tuni Gap in Clay County when four large birds appeared over a nearby ridge (elevation 4,000 feet). We stopped the car and observed the birds for 20 to 30 seconds with 7 x 35 binoculars at a distance of about 400 feet. It was immediately obvious that the birds were Sandhill Cranes (*Grus canadensis*). They flew in typical crane fashion with neck and legs extended as a "flying cross". The weather was clear, with a temperature reading of about 60 degrees. The birds continued through the gap in a northward direction.

[This is the third record of this species from North Carolina and the first from the western part of the state. The first record was from Robeson County in 1957 (*Chat*, 22:45, 1958) and the second was from Onslow County in 1970 (*Chat*, 38:39, 1974).—DEPT. ED.]

An Avocet in the South Carolina Piedmont

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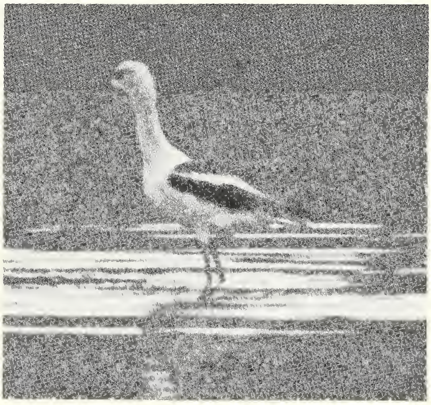
The first American Avocet (*Recurvirostra americana*) recorded in the South Carolina piedmont stayed at the Greenglow Farm operated by Don and Richard Quattlebaum, 1.5 mile NE of Pendleton, Anderson County, from 20 to 29 September 1974. The bird was observed by Clarissa Smith, Vivian Smith, Sidney Gauthreaux, Mr. and



American Avocet
Anderson County, S.C.
27 September 1974
Photo by
Gordon E. Howard

Mrs. Gaston Gage, the authors, and others. It was photographed on at least two occasions.

The bird spent its time at a newly constructed farm pond which contained less than 2 feet of water and abundant invertebrate life. It was very tame, feeding calmly at the approach of farm animals to within 30 feet, and allowing observers to walk to within 75 feet. The avocet fed with Blue-winged Teal (*Anas discors*) and Killdeer (*Charadrius vociferus*), walked across the pond in water up to its breast, and tipped-up repeatedly in the deeper water (cf. Bent's *Life Histories of North American Shorebirds*, Part I, Dover reprint, 1962). After the avocet had left the pond, the Killdeer were joined by a pair of Pectoral Sandpipers (*Erolia melanotos*). Sprunt and Chamberlain (*South Carolina Bird Life*, 1970) record 21 September as the previous early date for the avocet in South Carolina.

First Record of the Roseate Tern Nesting in North Carolina

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25 January 1974

On 2 June 1972, while conducting a survey of the breeding colonies of gulls and terns in eastern North Carolina, the authors discovered a Roseate Tern (*Sterna dougallii*) in a colony of several hundred Common Terns (*Sterna hirundo*), scattered Gull-billed Terns (*Gelochelidon nilotica*), and Black Skimmers (*Rynchops nigra*) in Lighthouse Bay in Carteret County, N.C. On a second trip to this island on 19 July 1972, a Roseate Tern was still present. Although the Roseate Tern remained with the flocks of Common Terns, either on the island's beach or overhead, no evidence of its nesting was obtained on either visit; and, in fact, its behavior was not that of a bird with nest or young. A year later, on 23 May 1973, we returned to this island and found two Roseate Terns in the Common Tern breeding colony. This time both were very disturbed by our presence and joined the Common Terns in protest as we approached the nesting colony. We then moved offshore and watched as one of the Roseate Terns settled on a nest at the edge of the colony. Subsequent inspection of the nest revealed two eggs which were very similar to, but slightly smaller than, those of the Common Terns. The nest and nest site were similar to those of the nearby Common Terns. Photographs were secured of the adults overhead and of the nest and eggs.

The occurrence of Roseate Terns in North Carolina is considered unusual at any season. There are but 11 previous records. One was collected at Pea Island on 22 August 1904, one was found at Cape Hatteras on 20 January 1937, and undetermined numbers were seen at Pea Island on 4 and 7 July, 26 August, and 8 September in 1938 (*Birds of North Carolina*, Pearson, Brimley, and Brimley, 1949, p. 188). Individuals were found at Oregon Inlet on 17 and 18 August 1939, and the species also was listed as fairly common at Pea Island between 28 August and 8 September 1939 (Gray, *Chat*, 4:3-4, 1940). Two individuals were seen at Town Shoal near Beaufort, North Carolina on 19 September 1939 (Simpson, *Chat*, 4:75, 1940). There were no further records until 23 May 1958 when one was seen near Southport by J. Irvine and M. Barnhill (*Audubon Field Notes*, 12:343). No observations of this tern in North Carolina have been published between 1958 and the present paper.

All of the above records appear to represent fall transients except the bird seen near Southport on 23 May 1958 and the individual seen on 20 January 1937 at Cape Hatteras.

The breeding range of this bird is very irregular. According to the American Ornithologists' Union's *Check-list of North American Birds* (1957), the Roseate Tern breeds locally in the western Atlantic from Nova Scotia to the West Indies. There appear to be no records between Cobbs Island, Virginia, and the Dry Tortugas. This observation from Carteret County, N.C., adds a new nesting site approximately 225 miles S of Cobbs Island and represents the addition of a new species to the nesting bird fauna of North Carolina.

Bruce Mack (*Chat*, 33:85-87, 1969) summarized the status of the Roseate Tern in the Carolinas. He commented that, while bill color was recognized as quite variable, spring migrants should have entirely black bills and that fall migrants should have varying amounts of red present in the bill. Breeding birds should also have partially red bills [This was based on Donaldson's paper on bill color changes in adult Roseate Terns (*Auk*, 85:662-668, 1968).] and that these implications needed to be tested in the Carolinas. It is of interest that the birds seen at the Carteret nesting site had bills that were entirely black; thus, bill color, apparently, is not always diagnostic of the breeding condition.

These observations were made while conducting research on community succession on dredge islands supported by the NOAA Office of Sea Grant, Department of Commerce, Grants Nos. 2-35178 and 04-3-158-40.

Unusual Numbers of Tennessee Warblers at Chapel Hill, N.C., in Spring of 1974

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On 15 April 1974, I found a Tennessee Warbler at Mason Farm near Chapel Hill, N.C. The song, given frequently, was compared with the F.O.N. "Warblers" recording, confirming the close and leisurely visual study. The species is a scarce transient in our area, quite unusual in spring; and the episode was recorded as an interesting, but isolated, rarity. On 30 April, however, Stanley Alford called me with a good description of a Tennessee Warbler, seen several miles to the south. On the same day, Annie Leigh Broughton, with Johnnie Payne and Esther Krigbaum, saw two birds at Duke Forest, and also later compared the song with a recording. Broughton again heard the song near her Chapel Hill home 1 May. On 4 May William H. and Margaret Wagner found yet another Tennessee Warbler by New Hope Creek, and at Mason Farm the writer located one by song, soon confirmed visually by Robert and Elizabeth Teulings. Finally, on 5 May Alford made a detailed visual study of a Tennessee Warbler at University Lake.

These seven records were from six different locations on all sides of Chapel Hill, the two Mason Farm sightings being 3 weeks apart. Further, in few cases were any of the observers aware of the others' sightings. It seems clear that, apparently without precedent, the Tennessee Warbler was of fairly common occurrence in the vicinity of Chapel Hill in late April and early May of 1974.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514

(All dates 1974 except as otherwise indicated)

COMMON LOON: An early fall sighting was recorded at Pea Island, N.C., on 15 August by Tom Howard and John Wright, and an individual in full breeding plumage was seen there on 23 August by Richard Peake, Dwight Peake, and Paul Sykes.

RED-THROATED LOON: At least 500 were seen in Pamlico Sound from the Ocracoke-Cedar Island, N.C., ferry on 30 November by John Fussell, Wayne Irvin, and Ray Winstead. Inland, two were uncommon visitors at Roanoke Rapids Lake, Halifax County, N.C., on that same date, observed by Merrill Lynch.

RED-NECKED GREBE: One was closely observed at Moore's Landing, Cape Romain N.W.R., S.C., on 23 March by Scott Connop and Robert Tymstra.

HORNED GREBE: Noteworthy inland counts of nine were recorded at University Lake near Chapel Hill, N.C., on 26 October by James Pullman and Elizabeth Teulings; 33 at Lake Wheeler near Raleigh, N.C., on 20 November by James Mulholland; and 74 at Roanoke Rapids Lake near Roanoke Rapids, N.C., on 28 November by Merrill Lynch.

SHEARWATERS AND STORM-PETRELS: Pelagic cruises by various observers to Gulf Stream waters off the North Carolina coast during August and September yielded the following tallies:

Cory's Shearwater	9	4	56	11	9	49	15
Greater Shearwater	0	0	2	0	3	0	2
Sooty Shearwater	0	0	0	0	0	2	0
Audubon's Shearwater	21	3	5	5	4	82	2
Shearwater sp.	9	0	0	0	0	10	6
Wilson's Storm-Petrel	26	33	99	18	75	76	0

The counts are listed chronologically for each species, corresponding to the dates and locations listed below.

3 August off Hatteras (Robert Ake and party)
4 August off Hatteras (Paul DuMont and party)
9 August off Hatteras (Bill Williams)
18 August off Morehead City (Paul Sykes and party)
1 September off Hatteras (Robert Ake and party)
13 September off Morehead City (James Mattocks and party)
14 September off Wrightsville Beach (Robin Carter and party)

BROWN PELICAN: A flock of 250 was present at Ocracoke Inlet on the North Carolina Outer Banks on 15 September, Joseph Hudick.

GANNET: Nearly 200 were observed feeding off Cape Point, Hatteras Island, N.C., on 28 October by Richard Rowlett and Will McDowell. It was noted that only a single adult was seen among this large aggregation.

GREAT CORMORANT: One was found near Southport, N.C., on 15 November by Frances and Bud Needham, and another was seen at Pea Island, N.C., on 29 November by Ed Burroughs, Ray Chandler, and Paul McQuarry.

DOUBLE-CRESTED CORMORANT: An impressive flight of an estimated 14,000 migrants was seen moving southward off Ocracoke Island, N.C., early on the morning of 27 October by Will McDowell and Richard Rowlett.

CATTLE EGRET: Eleven were seen feeding in a pasture near Hendersonville, N.C., on 24 September by Joyce and Joe Schatz. Occurrences of this species have only rarely been reported from the western piedmont and mountain sections.

GREAT EGRET: A locally uncommon occurrence was recorded at Zebulon, N.C., where a flock of six was seen on 14 August by Ricky Davis. Elsewhere, single birds were seen as inland wanderers on 5 September near Creedmoor, N.C., by Robin Carter; on 16 October at Townville, S.C., by Harry LeGrand; and on 19 October in Chatham County, N.C., 20 miles west of Raleigh, by Stanley Alford and Angelo Capparella.

YELLOW-CROWNED NIGHT HERON: One was seen inland near Winston-Salem, N.C., on 27 August by Royce Hough.

WHISTLING SWAN: Five were uncommon inland visitors at Lake Wheeler near Raleigh, N.C., on 20 November, observed by James Mulholland.

BRANT: One was seen at North Island, Georgetown County, S.C., on 9 November by John Cely.

SNOW GOOSE: Several sightings of migrants of the blue form were recorded during the fall season at inland locations. An individual was seen at Lake Hartwell near Clemson, S.C., on 2 November by Harry LeGrand and again on 9 November by Sidney Gauthreaux et al. Harry LeGrand also noted three at Pendleton, S.C., on 12 November. Elsewhere, three were present among a large flock of Canada Geese at Garysburg, N.C., 10 to 16 November, observed by Merrill Lynch.

CANADA GOOSE: A flock of 120 arrived early at Winston-Salem, N.C., 16 August, observed by Charles Frost et al.

FULVOUS TREE DUCK: Thirty-five were seen in a single flock at Huntington Beach State Park near Murrells Inlet, S.C., on 27 October by F.M. Probst.

BLUE-WINGED TEAL: An early fall transient was seen at Clemson, S.C., on 15 July by Harry LeGrand. On the North Carolina coast at Pea Island N.W.R., 15 were present on 2 August (Robert Ake et al.), 300 by 23 August (Paul Sykes et al.), and 3,500 by 1 September (Jack Hagan).

EUROPEAN WIGEON: One was present at Suttons Pond, the cooling water lake for Carolina Power & Light Company's nuclear power plant near Southport, N.C., on 15 November, observed by Frances and Bud Needham.

REDHEAD: A good count of 2,570 was recorded at Pea Island N.W.R. on the North Carolina Outer Banks on 30 November by Jack Hagan. Inland, a flock of 22 were locally uncommon visitors at Roanoke Rapids Lake, Halifax County, N.C., seen on that same date by Merrill Lynch.

COMMON EIDER: On the South Carolina coast, one was seen 26 October at Cape Romain N.W.R. by S.A. Barber, and two were found there on 31 October by Peter Laurie. One was seen later at Pea Island N.W.R. on the North Carolina Outer Banks 29 November by Ray Chandler and Paul McQuarry.

KING EIDER: Two in female plumage were observed closely on 28 October at Cape Point, Hatteras Island, N.C., by Richard Rowlett. Photographs were taken to corroborate the identification.

WHITE-WINGED SCOTER: Two were seen off Huntington Beach State Park, S.C., on 16 October by Dennis Forsythe and party. Elsewhere, an individual was seen off Fort Macon near Morehead City, N.C., on 1 November by Robert Hader.

BLACK SCOTER: A very early migrant was seen off Buxton, N.C., on 2 September by Joe Hudick. Unusual inland records for this species were reported from Raleigh, N.C., where an individual was found at Lake Benson on 25 October by Thomas Quay, and from Clemson, S.C., where one was seen on Lake Hartwell on 9 November by Sidney Gauthreaux, Bill Alexander, and Frank Moore.

COMMON MERGANSER: A male and three females were seen at Roanoke Rapids Lake near Roanoke Rapids, N.C., on 30 November by Merrill Lynch.

MISSISSIPPI KITE: Bruce and Steve Whitcomb observed 31 soaring in a loose flock above Interstate Highway 95 at the Lynches River in Sumter County, S.C., on 11 August.

BROAD-WINGED HAWK: A rather late individual was seen 12 November at North Wilkesboro, N.C., by Wendell Smith.

MARSH HAWK: An unusually early fall visitor was seen at Townville S.C., on 10 August by Harry LeGrand.

GOLDEN EAGLE: Two adults were seen near Bearpen Gap, Haywood County, N.C., along the Blue Ridge Parkway on 7 July by Harriet Hughes. Another adult was seen over Lake Hartwell near Clemson, S.C., on 23 August by Sidney Gauthreaux.

BALD EAGLE: An adult was seen 13 May at Chapel Hill, N.C., by Deane McGinnis. During the fall period, at least 11 individuals were seen at five coastal and three inland locations in the Carolinas. All sightings were of adult birds except for an immature seen at the Baruch Plantation near Georgetown, S.C., on 17 September by F.M. Probst.

PEREGRINE FALCON: Coastal sightings of at least 16 individuals were reported from seven locations from Pea Island, N.C., to Charleston, S.C., between 21 September and the end of November. An inland migrant was seen near Clemson, S.C., on 23 September by Harry LeGrand, and another was seen along the Blue Ridge Parkway over the Graveyard Fields area, Haywood County, N.C., on 29 September by Robert Ruiz.

AMERICAN KESTREL: Early coastal sightings of fall migrants were recorded 25 July at Johns Island near Charleston, S.C., by David Chamberlain and 15 August at Avon, N.C., by Tom Howard and John Wright.

SANDHILL CRANE: A flight of nine migrants was seen near Pendleton, S.C., on 17 November by Harry LeGrand. A 1973 sighting, not previously reported, was of a single bird seen near Fairlawn, S.C., on 23 December by Jere and Robert Eggleston, fide Kay Sisson.

SORA: A fall transient found dead on the Guilford College campus near Greensboro, N.C., on 2 September was a rare record for Guilford County, Michael Tovey.

PURPLE GALLINULE: A small breeding population was found present during the summer of 1974 at White Oak Marsh impoundment, Onslow County, N.C., by Edmund Weaver Jr. The birds were noted first on 22 May and later were determined to be nesting. This represents the only recently reported North Carolina breeding record for the species north of Orton Plantation in Brunswick County.

AMERICAN OYSTERCATCHER: An impressive count of 136 was recorded at Fort Fisher, N.C., on 29 November by James Pullman.

PIPING PLOVER: A flock of 55 early arrivals was noted 10 September at Bird Shoal near Morehead City, N.C., by John Fussell.

AMERICAN GOLDEN PLOVER: Transients were typically scarce this fall with only two coastal and three inland sightings reported, all of single birds. The inland occurrences were noted at Lake Surf near Vass, N.C., on 1 September by Robin Carter et al., and at Lake Hartwell near Townville, S.C., on 20 September and 1 November by Harry LeGrand.

BLACK-BELLIED PLOVER: An uncommon inland record was reported from Winston-Salem, N.C., where a lone migrant was present 23 through 26 September at the city landfill, observed by George Smith and others.

AMERICAN WOODCOCK: An adult with four downy young was seen along Saluda Dam Road in the Georges Creek Valley, Pickens County, S.C., on 1 April by William C. Grimm, a rare local breeding record.

LONG-BILLED CURLEW: One was seen on the North Carolina Outer Banks at Pea Island N.W.R. as early as 2 August by Robert Ake et al., and two were present there on 31 August, observed by Richard Rowlett. Another was seen at Huntington Beach State Park near Murrells Inlet, S.C., on 13 September by F.M. Probst.

UPLAND PLOVER: Individuals were seen 15 and 21 September at Cape Point, Hatteras Island, N.C., by Joe Hudick. Fall migrants also were noted at two inland locations where a single bird was seen near Goldsboro, N.C., on 3 August by Harry LeGrand and another at the Winston-Salem, N.C., city landfill on 4 September by Dwight Lee.

GREATER YELLOWLEGS: Five were locally unusual fall visitors at University Lake near Chapel Hill, N.C., on 22 October, observed by Stanley Alford.

BAIRD'S SANDPIPER: Two occurrences of this rare fall transient were recorded on the North Carolina Outer Banks where a single bird was seen at Oregon Inlet by John Wright, Tom Howard, and other observers during the weekend of 15-17 August, and two were seen later at Cape Point, Hatteras Island, N.C., by Richard Rowlett on 3 September. Inland, one was present 1-5 September at the Winston-Salem, N.C., landfill, observed by Charles Frost and Paul Spain.

SHORT-BILLED DOWITCHER: One was seen 16-17 August at Clemson, S.C., by Harry LeGrand, a first area record.

LONG-BILLED DOWITCHER: One was found 15 August at the Winston-Salem, N.C., city landfill by Ramona Snavely et al., a first record for Forsyth County.

STILT SANDPIPER: An exceptionally high count of 1,000 was recorded in the Bodie-Pea Island, N.C., area on 23 August by Richard Peake, Dwight Peake, and Paul Sykes.

BUFF-BREASTED SANDPIPER: Along the North Carolina Outer Banks a single bird was seen at Pea Island N.W.R. on 31 August and another at Ocracoke Island on 2 September by Richard Rowlett. Uncommon inland occurrences were noted at Lake Surf near Vass, N.C., where an individual was seen on 1 September by Robin and Carlie Carter et al., and at Clemson, S.C., where two were observed by Sidney Gauthreaux on 8 September. One was also seen at Winston-Salem, N.C., at the city landfill on 31 August by Royce Hough and other observers, and two were present there as late as 26 September.

MARBLED GODWIT: Good numbers were noted at several coastal North Carolina locations the second week of October, highlighted by counts of 50 at Oregon Inlet on 11 October by James Pullman, 21 at Bird Shoal near Morehead City on 12 October by John Fussell, and 60 at Fort Fisher on 12 October by John Hardwick. A flock of 75 was present at Bulls Island, S.C., on 22 November, observed by Caroline Newhall et al.

HUDSONIAN GODWIT: Two Outer Banks occurrences were recorded during the fall season. A single bird was seen on 6 October at Pea Island N.W.R. by Robin and Carlie Carter et al., and up to four were seen at the Bodie Island lighthouse pond on 26 October by William McDowell and Richard Rowlett.

SANDERLING: An unusually large concentration of an estimated 2,000 birds was recorded at Oregon Inlet, N.C., on 23 August by Richard Peake, Dwight Peake, and Paul Sykes.

AMERICAN AVOCET: A high count of 100 was recorded on the Outer Banks at Pea Island N.W.R. on 24 September by James Pullman. Ten were seen on the South

Carolina coast at Huntington Beach State Park on 17 August by F.M. Probst, and 54 were found at Bulls Island in Cape Romain N.W.R. on 10 November by Ted Beckett.

RED PHALAROPE: Three flocks totalling an estimated 125 birds were seen 40 to 50 miles offshore NE of Charleston, S.C., during an ocean cruise on 14 November by Don Kunkle.

WILSON'S PHALAROPE: Several scattered sightings of single birds were recorded by observers along the North Carolina Outer Banks during August and early September; Richard Rowlett reported four present at Pea Island N.W.R. 31 August to 3 September.

NORTHERN PHALAROPE: One was seen at Ocracoke Island, N.C., on 4 August by Bruce and Steve Whitcomb. A rare inland occurrence was reported from Transylvania County, N.C., where a lone migrant was closely studied at Betty Kay Lake in the Sherwood Forest community near Cedar Mountain on 9 September by Hervey Roberts et al.

POMARINE JAEGER: Four were seen at Cape Point, Hatteras Island, N.C., on 28 October by Richard Rowlett and Will McDowell.

PARASITIC JAEGER: On was seen during a pelagic cruise off Cape Hatteras, N.C., on 3 August by Robert Ake and party, and six were seen in waters off Morehead City, N.C., on 13 September by James Mattocks et al. On the Outer Banks, two were observed along the beach at Ocracoke Island on 2 September by Richard Rowlett, and the same observer sighted another at Cape Point on Hatteras Island the following day.

GULL-BILLED TERN: Five late lingerers were seen 16 November at North Litchfield Beach, S.C., by Julian Harrison, Peter Laurie, and Perry Nugent.

COMMON TERN: In the Morehead City, N.C., area a large concentration of over 5,000 was found at Bird Shoal on 25 September by John Fussell, and an unusually late lingerer was seen at nearby Fort Macon on 28 November by Robert Hader. An inland sighting was recorded at Rocky Mount, N.C., where four birds were seen on 18 August by Betty Davis and Louis Fink. Inland visitors were also noted in the Winston-Salem, N.C., area where seven were seen on 1 September by Paul Spain and one on 20 September by Fred Hill.

SOOTY TERN: One was a rare and unexpected summer visitor at Kiawah Island near Charleston, S.C., where it was present at least a month. The bird was first observed on 27 July by David Chamberlain and was last seen 27 August.

CASPIAN TERN: An uncommon inland occurrence was recorded at Lake Hartwell near Clemson, S.C., where two fall visitors were recorded on 5 September by Harry LeGrand.

BLACK TERN: An estimated 1,350 migrants were seen from the Ocracoke-Cedar Island, N.C., ferry on 2 September by Richard Rowlett. Uncommon inland fall sightings were recorded at Lake Hartwell near Clemson, S.C., where more than 100 were seen during the first week of August by Carl Helms and at Eden, N.C., where three transients were seen on 4 August by Carol and Edward Burroughs. Five were seen at Lake Gaston in Warren County, N.C., on 19 August by Merrill Lynch.

BLACK SKIMMER: An estimated 3,000 were at Bird Shoal near Morehead City, N.C., 13 October, observed by John Fussell.

MONK PARAKEET: Two were seen 1 June at Leicester, N.C., near Asheville by Betty and Bob Ruiz.

YELLOW-BILLED CUCKOO: A late nesting record was reported from Southern Pines, N.C., by Jay Carter, who found an adult incubating eggs on 15 September.

LONG-EARED OWL: A Long-eared Owl was heard calling 15 October at North Wilkesboro, N.C., by Wendell Smith in an area which has apparently become an established wintering ground.

SHORT-EARED OWL: Three were flushed from dunes at Huntington Beach State Park near Murrells Inlet, S.C., on 16 November by F.M. Probst and party.

WHIP-POOR-WILL: Three were heard calling on the late date of 24 November at Cedar Island, N.C., by John Fussell. Another was heard by the same observer on Bogue Bank near Salter Path, N.C., on 29 November.

COMMON NIGHTHAWK: Observers at several mountain and piedmont locations reported seeing large migrating flocks in late August and early September with a massive flight of over 1,000 noted at Winston-Salem, N.C., on 2 September by Kevin Hunter.

RED-COCKADED WOODPECKER: An individual was seen at Bunn's Lake 2 miles E of Zebulon in Wake County, N.C., on 24 November by Ricky Davis. This sighting, along with an earlier report by the same observer from the Zebulon area (*Am. Birds*, 28:29), indicates the possibility of the species being resident in the county outside the only locally known colony found north of Raleigh several years ago (see *Chat* 35:54).

GRAY KINGBIRD: One was seen at North River Marsh near Morehead City, N.C., on 28 September by Tom Quay and John Fussell.

WESTERN KINGBIRD: Two fall sightings were reported from the Outer Banks where a single bird was seen at Pea Island N.W.R. on 6 October by Stanley Alford and Angelo Capparella and another at Ocracoke Island on 27 October by Richard Rowlett. One was found inland at Raleigh, N.C., on 30 September by David Whitehurst.

SCISSOR-TAILED FLYCATCHER: One was present for several days, 3 to 5 November, at Brookgreen Gardens and Huntington Beach State Park near Murrells Inlet, S.C., observed by Charlotte Dawley, Fred Fricker, and F.M. Probst.

OLIVE-SIDED FLYCATCHER: One was an early and rare fall transient at Raleigh, N.C., observed on 11 August by James Mulholland.

BEWICK'S WREN: One was a good find at Zebulon, N.C., on 20 October by Ricky Davis.

SHORT-BILLED MARSH WREN: An uncommon inland occurrence was noted at Raleigh, N.C., where an individual was seen on 22 October by Gail Whitehurst.

EASTERN BLUEBIRD: Three were noted at Pea Island N.W.R. 29-30 November by Edward Burroughs. The species is very uncommon on the Outer Banks.

BLUE-GRAY GNATCATCHER: A late individual was seen at Roanoke Rapids, N.C., on 24 November by Merrill Lynch.

SOLITARY VIREO: One was seen at Raleigh, N.C., as late as 26 November by Gail Whitehurst.

PHILADELPHIA VIREO: A rare fall visitor was recorded at Raleigh, N.C., on 4 October by Gail Whitehurst, and another at Clemson, S.C., on 14 October by Harry LeGrand.

PROTHONOTARY WARBLER: A late individual was seen at Raleigh, N.C., by Gail Whitehurst on 6 November.

WORM-EATING WARBLER: An early fall transient was seen on the coast at Brookgreen Gardens near Murrells Inlet, S.C., on 10 August by F.M. Probst.

NASHVILLE WARBLER: Individuals were seen along the coast at Pea Island, N.C., on 23 September by James Pullman, and at McClellanville, S.C., on 25 September by Jay Shuler. Elsewhere, one was seen at Clemson, S.C., on 9 October by Harry LeGrand.

PARULA WARBLER: A late transient was seen at Fort Macon, N.C., on 6 November by John Fussell.

BLACKBURNIAN WARBLER: Rare appearances were recorded on the Outer Banks where a single fall transient was noted at Cape Hatteras, N.C., lighthouse on 23 September by Joe Hudick, and another at Pea Island, N.C., on 25 September by James Pullman.

BAY-BREASTED WARBLER: A very late migrant was seen at Bodie Island, N.C., on 29 November by Ray Chandler.

CONNECTICUT WARBLER: One was seen on 30 May in SW Polk County, N.C., near the Green River by Chris Marsh and Merrill Lynch. A fall transient was seen at North Litchfield Beach, S.C., on 30 September by F.M.Probst, and another there by the same observer on 15 October. Elsewhere, one was banded at Hillsborough, N.C., on 20 October by Charles Blake.

WILSON'S WARBLER: One was an early and rare fall visitor on 5 September at North Litchfield Beach, S.C., observed by F.M. Probst. At least four were seen by observers in the Blowing Rock, N.C., area during the CBC fall meeting weekend of 21-22 September. One was seen later at Clemson, S.C., on 9 October by Harry LeGrand.

BREWER'S BLACKBIRD: At Raleigh, N.C., a single male was seen by Gail Whitehurst feeding in her yard on 16 November, a positive local record for this species which has only occasionally been recorded in North Carolina.

YELLOW-HEADED BLACKBIRD: One was observed at Fort Macon, N.C., on 2 November by Robert Hader.

WESTERN TANAGER: An adult male was seen in the Sandhills Game Land, Richmond County, N.C., on 10 August by Jay Carter.

INDIGO BUNTING: One was seen as late as 11 November at Carolina Beach, N.C., by Ricky Davis.

BLACK-HEADED GROSBEAK: An individual, appearing to be an adult female, was observed at Bodie Island, N.C., on 30 September by James Pullman.

DICKCISSEL: One was present at a feeder in the Wilmington, N.C., area, 12 and 13 September, reported by Frances Needham. Another was seen at Ocracoke Island, N.C., on 27 October by Richard Rowlett.

LE CONTE'S SPARROW: Two were seen at Bodie Island, N.C., on 29 November by Paul McQuarry.

SHARP-TAILED SPARROW: A rare occurrence for the piedmont was recorded in Wake County, N.C., where two birds were found in early October at Greenview Farm by Chris Marsh, Merrill Lynch et al. One of those birds was collected and sent to the State Museum of Natural History, Raleigh.

LARK SPARROW: One was seen on the coast at Oregon Inlet, N.C., on 26 October by Will McDowell and Richard Rowlett.

BACHMAN'S SPARROW: An individual was seen on 3 October in Orange County, N.C., west of Durham by Mrs. Paul S. Payne, a rare local record.

LINCOLN'S SPARROW: Individuals were recorded at Hillsborough, N.C., on 8 October by Charles Blake and Clemson, S.C., on 22 October by Harry LeGrand.

LAPLAND LONGSPUR: A small flock of seven was seen on Hatteras Island, N.C., at Cape Point on 28 October by Richard Rowlett and Will McDowell. Two were also seen elsewhere on the Outer Banks at Ocracoke Island on 26 October by the same observers, and one was found on 30 November at Oregon Inlet by Paul McQuarry.

SNOW BUNTING: A flock of 30 was seen at Ocracoke Inlet on the North Carolina Outer Banks on 30 November by John Fussell, Wayne Irvin, and Ray Winstead. An individual was also present for 2 weeks at Doe Hall Plantation near McClellanville, S.C., in late October and early November, reported by Jay Shuler. A rare inland record was noted on 23 October near Chapel Hill, N.C., where a single bird was seen feeding in a barnyard by Stanley Alford and Angelo Capparella.

WANTED: Adventures in Bird Protection

Carlyle Blakeney, who represents National Audubon Society in the Southeast, is looking for a copy of T. Gilbert Pearson's *Adventures in Bird Protection.* If any reader knows of a copy for sale or donation, please write Louis C. Fink, CBC Roundtable Editor, Apartment 6, Building L, Tau Valley Estates, Rocky Mount, N.C. 27801.

Christmas Bird Count — 1974

(Continued from Page 16)

GREENVILLE, S.C.: Wilma Abrams, Mary Austin, Rosa Lee Hardin, Gladys Hart, Lillie Hart, Mary Jenkinson, Martha Lawrence, W.B. Lawrence, Bing Somers, Garry Worthington.

CLEMSON, S.C.: Bill Alexander, Bob Beason, Charlie Gage, Gaston Gage, Sidney Gauthreaux, Harry LeGrand, Frank Moore, Alan Peltz, Vivian Smith, Edwin Stearns, Adair Tedards.

ELKIN-RONDA, N.C.: Sidney Fletcher, David Hasse, Lin Hendren, William Roth, Jerry Tysinger.

CALDWELL COUNTY, N.C.: Nancy Alexander, Isabel Bernhardt, Margaret Harper, Anita Huffman, Mr. and Mrs. Garvin Hughes, Mr. and Mrs. E.M. Manchester, Mr. and Mrs. Fred May, Helen Myers.

TRYON, N.C.: Madeleine Cutler, Betty and Norme Frost, Robert Gibbs, Carrol Grenell, Dorothy McSwain, Joseph Schatz, Kay Sisson, Neil and Margaret Skelton, Jane Walker.

BUNCOMBE COUNTY, N.C.: Betty Ball, Robert Bruce, Dennis Carter, Margaret Finch, Easton Hulme, Lewis Kort, Gordon Mahy, Richard Price, Robert Ruiz, Chris Rustay, Roland Sargent, Eddie Stearns, Plumer Wiseman.

BREVARD, N.C.: Lydia and Paul Barrett, John Bohan, Pat Bohan, Rick Bohan, Gordon Brown, Kay and Ray Brown, Amy Collins, John and Merle Collins, Molly Collins, Owens and Louise Davidson, Preston Davies, Bill Fellows, Ercel and George Francis, Dick Garren, Mary Gilbert, Geneva Hagen, Tom Hallowell, Byrniece Hansbrough, Helen Hardin, W.L. Highton, Curt Holland, Gail Holland, Susan and Walter Holland, Genevieve Lilly, Harry Logan, Ann Lyon, Gaylord Lyon, Betty McIlwain, Walter McKelvey, DeWitt and Helen Parsons, Ralph Raymond, Hervey Roberts, Joseph Schatz, Harold Sims, John Sterk, Arthur Wood.

GREAT SMOKY MOUNTAINS NATIONAL PARK, Tenn.-N.C.: Winnifred Brown, James Campbell, Glenn Cardwell, Don DeFoe, Lori DeFoe, Elizabeth French, James Graves, Maurice Grigsby, Joseph Howell, Bruk McDonald, Kam McDonald, Terry McGown, Louise Nunnally, J.B. Owen, Boyd Sharp Jr., Johneta Smith, Louis Smith, Arthur Stupka, James Tanner, Joe Watson, Clara Mae Wodtke, Bill Williams, Irene Williams.

Carolina Bird Club
INC.

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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from State and Federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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All CBC members not in arrears for dues receive *The Chat*, a quarterly journal devoted to bird study and conservation, and the *CBC Newsletter*, which carries information about meetings, field trips, and club projects. Articles intended for publication in *Chat* may be sent to the Editor or to the appropriate department editor listed in a recent issue of the bulletin. Items for the *Newsletter* should be sent to its Editor, F.M. Probst, Route 2, Box 80-C2, Pawley's Island, S.C. 29585. Correspondence regarding memberships, changes of address, or requests for back numbers of either publication should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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The Chat

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OUR COVER—A young Louisiana Heron clutches the bare limb of a tree on Battery Island in a photograph by Jack Dermid. Note wisps of natal down streaming from the feathers of the crown and the sheaths still encasing the wing feathers. (Photo courtesy N.C. Wildlife Resources Commission.)

A TIME FOR CHANGE

The present issue of *The Chat* is unusually small because we are in the process of changing our schedule of publication. For many years the bulletin has been dated March, June, September, and December; but copies rarely have reached the readers less than a month late. The U.S. Postal Service has strict rules about the mailing of magazines, and the Postmaster at Tryon has advised us to change the wording of our statement of entry in order to avoid revocation of our second-class mailing permit. Beginning with this issue, *Chat* will be mailed quarterly with no months specified. For the convenience of our readers, the bulletins will be dated according to the season of publication—Winter, Spring, Summer, and Fall. The staff will attempt to have issues in the mail regularly in January, April, July, and October. In the future, the Christmas Bird Count will appear in the Spring bulletin and the Spring Bird Count in the Fall, thus giving Harry LeGrand much needed additional time to prepare his copy. (Deadlines for local compilers remain the same.) Bob Teulings indicates that the new schedule will make it easier for him to continue handling editorial duties for both *Chat* and *American Birds*. Publishing the fourth number of each volume in October certainly will make life easier for the Editor, who finds it very difficult to compile the annual index during the rush of family activities between Thanksgiving and Christmas. We sincerely hope the new publication dates will enable all the staff members to do a better job for CBC.—EFP

A GLANCE AT THE PAST AND THE FUTURE

This is the forty-eighth issue of *Chat* to go to press with my name on the masthead. Looking back, I can see many things I would have done differently if I had known then what I know now; but mostly I see the names and faces of the hundreds of people who have devoted their time and talents to CBC during the past 12 years. I sincerely appreciate cooperation of all the staff members, club officers, authors, photographers, artists, and bird count compilers who have done their best to make *Chat* a useful and attractive journal.

Looking ahead, I can see a bright future for Carolina Bird Club and its publications, growth in membership, increased financial support for club projects, and larger attendance at meetings. And here I offer a word of caution. Let us take care that as the club grows we do not neglect extending a true spirit of friendship to our new members. The best thing about CBC meetings is the way our outstanding field observers take time to show inexperienced birders as many interesting species as possible and to offer tips on bird study. Members fortunate enough to own telescopes patiently share the view with all who want to look. Field trip leaders who can recognize most birds at a glance sometimes squeak until their jaws ache so a beginner can add a common species to his life list. Having benefited from such kindness myself, I hope that CBC's best birders will continue to be good teachers. The gentleman who let me look through his Balscope at Myrtle Beach in January of 1959 had no way of knowing he was befriending a potential editor of *Chat*. (A 28-year-old housewife, expecting my fourth child, and a college dropout, I was indeed a most unlikely candidate!)

Among today's beginning bird students are future bird club presidents, conservationists, zoology professors, editors of ornithological journals, authors and illustrators of nature books, and a new generation of dues paying members without whom there can be no CBC. New members are VIPs!—EFP

BREEDING LOCALITIES OF COMMON GRACKLES WINTERING IN THE CAROLINAS

PAUL A. STEWART

Banding and recovery records of Common Grackles (*Quiscalus quiscula*) in North and South Carolina were obtained from the Bird Banding Laboratory, Migratory Bird Populations Station, Laurel, Maryland. These reports were used to determine breeding localities of Common Grackles wintering in the Carolinas and wintering localities of Common Grackles breeding in the Carolinas. There were 135 usable records of birds recovered in the Carolinas after being banded in these states or elsewhere and 106 of those banded in South Carolina and later recovered in South Carolina or elsewhere.

METHODS

Banding and recovery records were selected to represent breeding and wintering areas, with the season during which the birds are on their breeding grounds being defined as the period April through October and winter as the period December through February. Records of birds banded or recovered during November and March were eliminated from the analysis on the assumption that the birds may have been in migration when recorded.

RESULTS

Figure 1 shows the distribution of the 106 Common Grackles recovered during April through October after being banded in South Carolina during December through February. The largest number went to Virginia, with 34.0% of the sample recovered in that state. A relatively large proportion, 20.8%, also went to West Virginia. With an additional 8.5% of the sample going to Tennessee, 5.7% to North Carolina, 0.9% to Georgia, and 7.5% remaining in South Carolina throughout the year, 77.4% of the birds remained south of Maryland after wintering in South Carolina.

Of the birds going farther north than the southern boundary of Maryland after being banded in South Carolina during the winter, the largest proportion went to Ontario (6.6%), with only slightly fewer going to Pennsylvania (5.7%) and New York (4.7%). It is notable that none of the 106 Common Grackles were recovered in states east of New York after being banded during the winter in South Carolina. Westerly, single birds went as far as Minnesota and Indiana.

Figure 2 shows the percentages of the 135 Common Grackles banded in various regions during the breeding season and later recovered in the Carolinas during the winter months. Of the 135 birds only 15 were recovered in South Carolina, with 120 recovered in North Carolina. Few recoveries are available from birds banded south of Maryland, already shown to be the principal breeding region of Common Grackles wintering in South Carolina. Thus, of the 120 recoveries taken in North Carolina, nearly all were from the more northern region. These recoveries indicate that birds from the more northern states, including the New England states, winter in North Carolina instead of moving farther into South Carolina.

Of the 15 wintering Common Grackles recovered in South Carolina, only two came from the region north of Virginia, or from New York. Further, of the 15 recoveries, eight were birds also in South Carolina during the breeding season. Thus, this small sample of 15 birds suggests that more than half of the Common Grackles wintering in South Carolina are birds also present there during the breeding season. However, the sample of 135 is biased by its lacking data from birds banded in Virginia and West Virginia, the more southern regions where most of the birds wintering in South Carolina breed (Figure 1).

Whereas, some Common Grackles remain for the winter after spending the breeding season in South Carolina, all available data indicate that the birds move farther

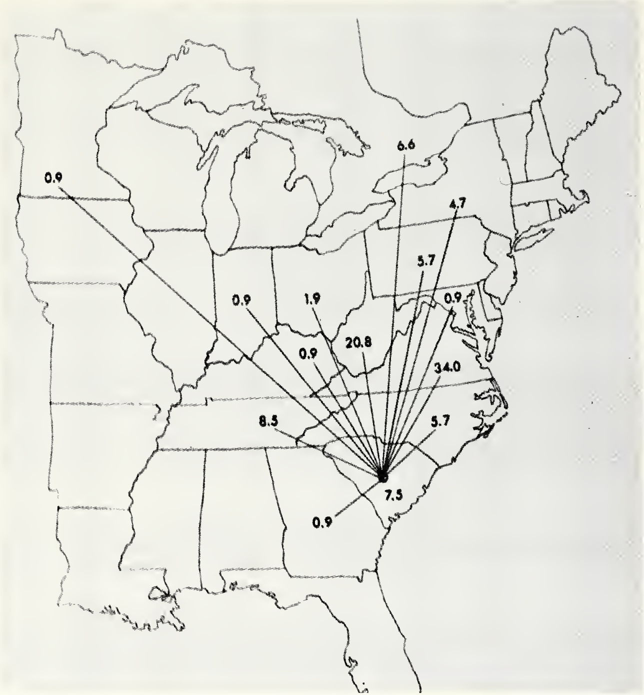
6.6
0.9
4.7
5.7
0.9
1.9
0.9
20.8
0.9
34.0
8.5
5.7
7.5
0.9

Fig. 1. Percentages of 106 Common Grackles recovered in various states and provinces during breeding season after being banded in South Carolina during winter.

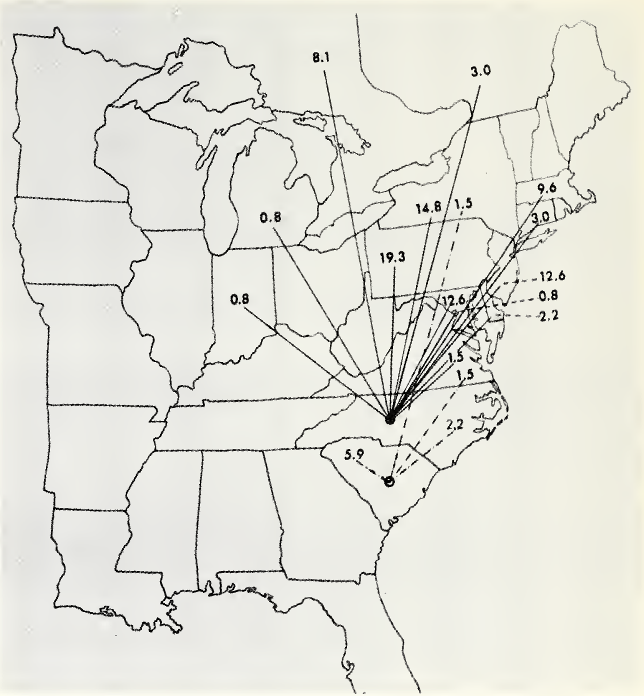
8.1
3.0
9.6
0.8
14.8
1.5
3.0
19.3
12.6
0.8
12.6
0.8
2.2
1.5
1.5
2.2
5.9

Fig. 2. Percentages of 135 Common Grackles banded in various states and provinces during the breeding season and recovered in the Carolinas during the winter months.

south after spending the breeding season in North Carolina. Thus, of 30 recoveries of birds banded and recovered in North Carolina, none was taken in both wintering and breeding seasons. Nine of the 106 birds banded in South Carolina were recovered in Tennessee during the breeding season and six in North Carolina. Of the 120 banded birds recovered in North Carolina in winter, none came from Tennessee. Data from Tennessee and North Carolina agree in showing that birds move southward after breeding at the latitude of these two states.

DISCUSSION AND SUMMARY

It is unfortunate that I was unable to obtain data on the total numbers of Common Grackles banded in each of the states and provinces from which birds came to winter in the Carolinas. Without these data, there is no indication whether a specified number of recoveries includes all of those birds banded or only one of thousands. Thus, the proportions coming from the regions represented by the various states and Canadian provinces is incompletely shown. Data from birds banded in South Carolina and recovered elsewhere have the advantage that information on the total number banded to yield the recoveries is unimportant.

Common Grackles wintering in South Carolina breed largely in the area south of Maryland. Those wintering in North Carolina come from more northern regions, including the New England states. Birds breeding in North Carolina move southward for the winter, but some Common Grackles breeding in South Carolina remain there throughout the year. One Common Grackle traveled as far west as Minnesota after spending the winter in South Carolina; however, no South Carolina winter residents have as yet been recovered in New England.

ACKNOWLEDGMENT

I appreciate the help of Jay M. Sheppard, who made the data on Common Grackles banded or recovered in the Carolinas available for my use in this paper.

203 Mooreland Dr., Oxford, North Carolina 27565, 30 November 1973.

CBC Roundtable

... with Louis C. Fink

Downy Wookpecker with Bizarre Bill

On 13 February 1974, a mature male Downy Woodpecker with a bill 1½ inches long came to my feeder. The upper mandible stuck upward, was useless, and probably interfered with forward vision. The bird was of normal size and coloring.

One must wonder about the frustration of the mother in feeding the bird. Obviously, she accomplished the task and the bird grew to maturity—and remained in the area until 6 March.

It could not peck, nor pick up bits of food without considerable effort because its tongue could not reach more than half the length of its elongated bill. I placed grated beef kidney suet in a shallow dish on my window sill; the bird came frequently and we could observe it from 10 inches away. The only way it could pick up a bit of suet was to turn its head sideways and pick up the bit about the middle of its bill. This took several attempts, as one might with chopsticks. Food that accumulated on the tip of the bill had to be shaken or scraped off.

A few days before it left, the woodpecker clung to one of my wire-screen suet feeders, with its wings "shivering" and its head dropped to one side. I easily caught the bird in my hand. I carried it to the dish of suet and offered the bird food at the side of its bill, and it ate readily. I removed my hand and it continued to eat.

While holding the bird, I clipped away the apparently dead and dried mandible which stuck up in front of its eyes. I was tempted to clip away about half of the 1½ inch bill, as it seemed to be dead and transparent, but decided to let nature take its course. I also decided not to collect the woodpecker as a specimen.

The mandibles were not straight enough to close properly, and they flared outward slightly at the tips, eliminating a point for pecking.

Other Downy Woodpeckers seemed not to like this bird and frequently chased it from the feeders. With darkness, other birds went to their roosts, and my little fellow would come to the dish and eat in peace. I wondered how it found its roost in the dark. A few days after I caught it, the bird flew away and never came back. It was a conversation piece and put on a heart-breaking show.—NORME D FROST, Box 271, Tryon, N.C. 28782.

Possible Eskimo Curlew on Pea Island

[Note: One of the purposes of this column is to alert bird students of the possibility of rare finds. The following observation by Dr. Sonneborn is just such an alert, referring to a bird nearly extinct and rarely recorded along the Atlantic Coast south of New England.]

On 28 April 1973, I was walking on the large sandflats at the extreme northern end of Pea Island National Wildlife Refuge (the area bounded by Oregon Inlet and the north dike of the North Impoundment). When I was about in the middle of the area, I saw three curlews through my 30X telescope. They took off and they were clearly Whimbrels, a species with which I am thoroughly familiar.

But there was a fourth bird, about two-thirds the size of the other three, generally buffy brown with no obvious rump or wing markings, and a shorter but clearly down-curved beak. As it flew, I had the impression of buffy under-wing coverts. All the birds flew toward the ocean and seemed to land, but I could not find them again.

There are several unsatisfying things about this record in addition to the great distance involved: the failure to see leg color and the lack of leisurely study. However, the description of this bird may kindle interest in looking for this species, and perhaps give the reader some idea of the feeling I had when seeing a small curlew in North America.—DAVID SONNEBORN, Medical College of Virginia, MCV Station, Richmond, Virginia 23928.

Laughing Gulls in Flight

At 15:45 on 19 October 1973, at Whalebone, N.C., I observed several first-year Laughing Gulls which were lacking three or four inches from the tip of one or the other wing. Both wings were intact in most cases, but in one case, both tips were missing.

The flight of the gulls did not seem to be affected, but doubtless they were affected. The missing tips appeared to have been cut, and not due to molt. I wonder if the wings could have been clipped by fish (possibly large Bluefish) as the gulls hovered over the schools chasing bait fish.

About 16:30 on 20 October 1973, a sizable flock of Laughing Gulls (almost entirely after hatch year) gathered over the stern of my fishing boat to catch scraps tossed in the air. I noticed that often a gull would have one or both feet tucked completely out of sight under the feathers of the belly and lower tail coverts. Usually the feet remained hidden even while the gulls maneuvered for position, but occasionally they would re-appear. No effort was apparent on the part of the gull as the feet gradually became buried under the feathers. The ability to bury the feet serves to streamline the bird in flight.—FRED S. HILL JR., 2750 Country Club Road, Winston-Salem, N.C. 27104.

[Note: James F. Parnell believes it possible that the missing wing tips represent molt, but agrees that the Bluefish might well sever a wing if the gull dipped it. "The hidden foot trick is more common and occurs regularly in gulls."]

A Reasoned Comment on Collecting

The purpose of the Pan-American Society for the Protection of Birds doubtless will merit the endorsement of most CBC members. However, I question the statement attributed to Pan-American: "*many* people are concerned about the *many abuses* (italics mine) perpetrated by the bird collectors."

As a long-time holder of a Federal permit, I believe collecting and specimen preservation important and defensible. Without earlier collecting, where would we be in our knowledge of birds, their description, distribution, anatomy, relationships, etc.?

Consider the collecting and research of Wilson, Audubon, Bachman, and many others, not forgetting the Brimleys, Wayne et al. Expand this thought to include the study of birdlife world-wide. Remember also that application of the facts proves vital in the management of sanctuaries and refuges.

I emphasize my belief that wide-spread need for collecting no longer exists, at least in many countries. In many cases, recognizable photographs are acceptable in lieu of specimens. In passing, consider the predicament of the editor or reviewer who—without concrete evidence—is called on to judge the ability and credibility of any given observer.

Finally, I think building of personal collections of birdskins should be prohibited. Those now existing might be turned over to a museum as gifts or long-term loans, for future preservation and greater availability.—E. BURNHAM CHAMBERLAIN, 8 Huguenot Avenue, Charleston, S.C. 29407.

Earle Greene Is Lost to the 600 Club

On 12 March, Earle R. Greene of St. Simon's Island, Georgia, died after a short illness. A professional wildlife biologist, Earle was the author of *A Lifetime With the Birds* and founder of the 600 Club. His records of the Club were turned over to Terry Moore of Atlanta, who plans to carry on the work. A memorial to Earle is being planned, and we shall try to carry news of it.

Bird Finding in the Carolinas

ROANOKE RAPIDS LAKE, Halifax and Northampton Counties, N.C.: Roanoke Rapids Lake is a 9-mile-long hydroelectric reservoir situated on the Roanoke River just NW of Roanoke Rapids. It is noted for its large inland wintering population of Ring-billed Gulls, its variety of wintering waterfowl, and its attraction for many unusual inland migrating long-legged waders, gulls, terns, and shorebirds. Four main access points enable the bird watcher to view almost the entire surface area of the lake. Directions to these four vantage points are detailed below.

1. Roanoke Rapids Lake Dam (south shore): Drive west on W. Fifth Street in Roanoke Rapids to intersection with Oakwood Avenue. Turn right on Oakwood and continue until deadend at the dam. Park in the parking lot overlook and scan over the dam and the headwaters of the lake for gulls and diving ducks. Permission can be obtained from dam personnel to drive through the gates down to the lake shore. (Use telephone at gate entrance to request permission.)

2. Pete's Marina (south shore): Drive west on US 158 approximately 8.2 miles from its intersection with NC 48 at Roanoke Rapids. Turn right on SR 1400 and drive about 1.5 miles to SR 1422, which turns off to the left. Continue on this road about a mile to the deadend at the lake. Scan the lake here for loons, grebes, diving and puddle ducks, assorted gulls, and for occasional cormorants on exposed stumps on the right a low water level.

3. Mid-lake overlook (north shore): From the intersection of NC 46 and NC 48 at Gaston, drive west on NC 46 for 5.6 miles to SR 1220, which is unpaved and turns off to the left. Drive to deadend of 1220 and walk through the woods to a suitable vantage point. This is a good area for all waterfowl and gulls.

4. Vultare (north shore): On NC 46 drive west 2 miles from SR 1220 turnoff (see mid-lake overlook directions above) to intersection of NC 46 and SR 1213 at Vultare Crossroads. Turn left onto SR 1213 and continue to Wildlife landing and parking lot at lake. For variety of birds this may be the best vantage point available. A good section of the upper end of the lake can be scanned for puddle ducks, waders, and gulls. Within fairly easy walking distance to the right (west) is an extensive cattail-juncus marsh in the extreme upper end of the lake. The marsh attracts large numbers of puddle ducks in winter and herons, egrets, rails, and bitterns in spring and fall. During water drawdown (spring and late summer), the entire upper end becomes one massive mudflat. Be ready for *any* species of shorebird! Willets, Red Knots, Black-bellied Plovers, Sanderlings—these and many others have been seen. Bald Eagles are a possibility.

The best season to bird at Roanoke Rapids Lake is open to some question. Large numbers of waterfowl generally move through from early November to mid-December and again from early February to early April. Most herons and egrets appear from late July to September and in spring (April and May). Ring-billed Gulls are most common in mid-winter, large flocks of Bonaparte's Gulls move through in mid-April, and Laughing Gulls and terns appear from mid-April through May and again from late August to October.

During the past 4 years, 31 species of waterfowl (including loons and grebes), 9 species of herons and allies, 19 shorebird species, and 10 species of gulls and terns have been recorded on the lake. Undoubtedly Roanoke Rapids Lake will furnish many new surprises in the future.—J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

Little Gulls Breeding in North America

In a letter dated 15 August 1974, Charles H. Blake of Hillsborough, N.C., commented in connection with a General Field Note by J.H. Carter III and James F. Parnell (Little Gulls at Cape Hatteras, N.C., *Chat*, 38:40) that the Little Gull is now known to breed near Toronto, in the Niagara area, and at Lake St. Clair. "The curious point," Dr. Blake added, "is that the much more abundant Black-headed Gull is apparently not known to breed in the New World." For more information on the nesting of Little Gulls in Ontario, see *American Birds*, 25:853.—EFP

Purple Martin News

Over the years a number of people have inquired about subscribing to *Purple Martin News*. Published monthly by the Griggsville Wild Bird Society, "North America's backyard journal" is a lively newspaper catering to nature lovers and gardeners. Memberships in the Society are $5.00 per year in the United States. The address is Purple Martin Junction, Griggsville, Illinois 62340.—EFP

Our Writers

CBC Roundtable would like to acknowledge the achievements of all club members who have papers and notes about birds published in journals other than *Chat*. The Department Editor does not know the names of all CBC members and does not have access to all the ornithological journals, so please do not be too modest to send a reprint or a post card giving the appropriate literature citation.

"Factors Influencing Prey Selection in the American Kestrel" by Helmut C. Mueller of Chapel Hill, N.C., appeared in *Auk*, 91:705-721. Dr. Mueller found that the conspicuousness of the prey was relatively unimportant. His five tamed birds were offered a choice of varying ratios of gray and white mice on white or gray backgrounds. Individual birds showed a tendency to select the same type of prey over and over. The author also noted a tendency for the birds to select the odd animal, the one that differed in color from the majority of those offered in the experiment. "This latter tendency," he concluded, "could contribute to the selection of unfit prey and have important implications for the ecology and evolution of both prey and predator."

"Herring and Great Black-backed Gulls Nesting in North Carolina" by James F. Parnell and Robert P. Soots appeared in *Auk*, 92:154-157. In the course of their study of nesting birds on man-made dredge islands in North Carolina's estuaries, the authors found a sizable colony of Herring Gulls near Oregon Inlet in Dare County, N.C., and a scattering of breeding birds as far south as the lower Cape Fear River. One or two pairs of Great Black-backed Gulls nested at Oregon Inlet in 1972 and 1973.

General Field Notes

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Summer Record of a Common Loon Inland in North Carolina

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4 November 1974

On 1 July 1974 a Common Loon (*Gavia immer*) in nonbreeding plumage appeared on a small pond in Charlotte, N.C., about 240 km inland from the coast. Based on a literature review and contacts with local ornithologists, there appear to be no inland records of this species in summer.

The bird remained on the pond through 20 July, and was found dead on the shore 21 July. On at least four occasions during the preceding period the loon had tried to fly without success. An examination of the carcass yielded the following: (1) the bird was not molting, (2) the digestive tract was empty, (3) fat reserves were absent, and (4) although no living parasites were found, over 200 old parasitic lesions were present in the lining of the lower abdominal cavity. Decomposition made the sex indeterminable.

Based on the above, it appears that the pond (approximately 50 m long) was too short for the loon to become airborne. Presumably the trapped bird then died of starvation. The skin of this bird is now in the Collection of the Biology Department at UNCC.

Great Cormorant Photographed at Pea Island National Wildlife Refuge, N.C.

GILBERT S. GRANT and SANDRA S. GRANT
Department of Biology, University of California
Los Angeles, California 90024

10 October 1974

On 1 December 1973, we discovered an immature Great Cormorant (*Phalacrocorax carbo*) in a pond just north of North Pond, Pea Island National Wildlife Refuge, N.C. The bird was feeding actively at the time, and we momentarily passed it off as a Double-crested Cormorant (*P. auritus*). However, its strikingly different diving behavior prompted a closer study. On each dive, it leaped upward and forward, exposing some of the white on its ventral surface. This same manner of diving also has been noted by the authors in Red-necked Grebes (*Podiceps grisigenus*). This diving behavior in the Great Cormorant, which is described by Bent (1964), is probably adapted to its feeding preference. Great Cormorants feed primarily on bottom fish (Lack, 1945) while the Double-crested Cormorant feeds mainly on free-swimming forms (Bent, 1964) at intermediate depths.

The bird flew on several occasions, circled the pond and returned to the water allowing excellent views of its dark neck contrasting with the white underparts. Additionally, its large size, yellow lower mandible, yellowish naked skin of the throat, and whitish throat area identified it as a Great Cormorant. This finding represents the fourth documented record for North Carolina. Several color slides were secured and deposited in the National Photoduplicate File (Accession No. 119-1Ta, 119-1Tb). Unfortunately, the transparencies were not of suitable quality for publishing in *The Chat.*

Great Cormorants have been sighted with increasing frequency in North Carolina since first discovered there in 1970. The first sighting was of an immature bird studied by H.D. Pratt as it flew overhead at Oregon Inlet on 30 December 1970. This, or perhaps another, immature Great Cormorant was observed about 6 hours later on that same day by R.J. Hader and D.L. Hughes about 6 miles S of Oregon Inlet (Teulings, 1971). An immature bird was sighted one year later by R.H. Peake on Bodie Island, just north of Oregon Inlet, on 30 December 1971 (Teulings, 1972) and the third sighting was in Croatan Sound on 6 April 1973 by J. Potter and E. Potter (1974). Two Great Cormorants were recorded on the 1973 Christmas Bird Counts in North Carolina. One was recorded by D. Peake and R.H. Peake on the Bodie-Pea Island count on 31 December 1973 and one was found by J.F. Parnell on the Wilmington CBC on 15 December 1973 (Potter, 1974).

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An Ash-throated Flycatcher at Raleigh, N.C., with Some Notes on the Occurrence of This Species in the Eastern United States

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On 16 May 1973 at about 10:00, I was walking along a railroad line which passes through the North Carolina State University campus. At a point where the line passes behind Pullen Park, I noticed a bird perched on an exposed branch of a small tree—perhaps 6 feet from the ground. The day was sunny with the sun directly behind me and shining onto the back of the bird. At first glance I took it to be an Eastern Wood Pewee (*Contopus virens*) (one had been singing in the vicinity) because of the gray-black back with poorly marked wingbars and white edging on the primaries, as well as the absence of tail-flicking. It appeared larger, however, and when I examined it with 8x40 binoculars, I noted rufus in the primaries and tail feathers, the latter appearing brighter than the primaries. As the bird turned its head to watch me, I saw that it had whitish underparts. The bill was rather stout and appeared to be completely black. I made these observations at a distance of about 30 feet, but could not get a better look at the underparts of the bird as the tree it was in was on the edge of a railroad embankment. Fortunately, it did call twice, both calls being a single rather squeaky upward-slurred note, best described as similar to one of the calls of the Great Crested Flycatcher (*Myiarchus crinitus*). The bird then flew away.

Mu inclination at this point was the bird was indeed an Ash-throated Flycatcher (*Myiarchus cinerascens*), and I hurried over to the campus to check some references.

The possibility of a melanistic or partly melanistic Great Crested Flycatcher entered my mind, but I have never read of one, and the whitish underparts would make such a possibility unlikely.

Generally the plumage description I have given fits that of the Ash-throated Flycatcher very well. The bird I saw looked very much like the illustration in Peterson's *Field Guide to Western Birds* (1961), except that the rufus in the wings and tail was more pronounced, possibly because of the good light. My general impression did not agree with that of Peterson in his Eastern field guide (1937), i.e. "Like a small Great Crested Flycatcher"; but his statement "yellow of underparts paler, back gray" brings his impression more in line with what I saw, except that I was not able to see any yellowish coloration at all on the underparts. I also could not discern any olive coloration in the plumage of the bird, and it did not appear as slim as most Great Crested Flycatchers do to me. The bird I saw was more like the illustration in Peterson's Western field guide (1961) than in *Birds of North America* by Robbins, Bruun, and Zim (1966). On 14 July 1973 I made a trip with Sebastian Patti of Kansas City to the Black Mesa area of extreme northwestern Oklahoma, where the Ash-throated Flycatcher was rather common. The birds I saw there were identical to the bird I saw at Raleigh, except that the blackish-gray of the back was replaced by a paler shade. This apparent discrepancy may be explained by an observation made by Bent (1942): "Practically all the June and July adults that I have seen are in much worn plumage ...." Bent suggested that the birds molt in August and are in fresh plumage in the spring. Sutton (1967) also has written "Of nine Oklahoma specimens at hand, five males and three females (May 19 - July 5) are in worn, much-faded breeding feather. A male taken August 30 is in the midst of the postnuptial molt."

Robbins et al. (1966) state: "The call of short sharp notes has the quality of the Western Kingbird's (*Tyrannus verticnis*)." I have heard the latter many times in Kansas. While the quality of the calls I heard given by the Raleigh bird fits that description, the bird I saw did not call in a series. The birds seen in Oklahoma gave many and variable calls, some of which resembled the note I heard twice from the Raleigh bird. In this context a comment by Florence A. Merrian Bailey, cited by Bent (1942), is pertinent: "[The calls of the Ash-throated Flycatcher] closely resemble those of the eastern Great-crest, (*M. crinitus*)."

I cannot find any spring records for the Ash-throated Flycatcher in the eastern United States. The following are the published fall and early winter records:

Maine	17-20 Sept. 1971	Isle of Shoals	Finch, 1972
Massachusetts	25 Nov. - 3 Dec. 1972	Gloucester*	Finch, 1973
Rhode Island	15 Sept. 1960	Block Island**	Bagg & Emery, 1961
New York	22-24 Nov. 1970	Larchmont*	Boyajian, 1971
Maryland	25 Nov. 1911	Beltsville**	Simon, 1958
	22-26 Nov. 1957	Monkton**	Simon, 1958
	4 Dec. 1962	Emmitsburg	Scott & Cutler, 1963
Virginia	26 Dec. 1957	Little Creek	Richardson, 1958
Florida	21 Oct. 1956	Pensacola	Simon, 1958
	24 Dec. 1944	Pensacola**	Weston, 1946
Alabama	3 Nov. 1958	Dauphin Island**	Newman, 1959

* Photographed
** Specimen taken

The reasons for western birds straying to the eastern United States are at best obscure, but the literature indicates two areas of possible clarification: (a) normal dispersal and (b) abnormal migratory movement, i.e. disorientation. Johnston (1961) has summarized and defined dispersal as "Movement from site of birth to site of breeding" and noted that dispersal may carry an individual "beyond the area of established distribution of a species." Furthermore, Johnston noted that "The genetic heritage of some of the individuals probably casts them in the role of dispersers to long distances." That some species have a tendency to disperse farther than others, and that such widely-dispersing species tend to be those with fewer subspecies is suggested by Berndt and Sternberg (1968), who stated, "An examination of recoveries of female Pied Flycatchers (*Ficedula hypoleuca*) shows that many first breed a considerable distance from their birthplace, in contrast to the situation of the Blue Tit (*Parus caeruleus*) and Nuthatch (*Pusilla europaea*). The degree of such dispersion in these species, and presumably therefore the gene flow, is inversely correlated with the number of geographical races they contain." The Ash-throated Flycatcher, as listed in the A.O.U. *Check-list* (1957), consists of two races, nominate *cinerascens*, which is "migratory throughout most, if not all, of its range" (Lanyon, 1961), and *pertinax*, which is resident in Baja California. These facts indicate, taking into account the conclusions of Berndt and Sternberg (1968), that *M. c. cinerascens* would tend to be a widely-dispersing taxon. Indeed, of the specimens taken and identified in the eastern United States, all have been of this race (Simon, 1958; Weston, 1946; Newman, 1959).

The second possible explanation for the straying of western birds to the east is rather speculative but has been convincingly stated by Able with reference to eastern birds straying to the Pacific coast (Able, 1972): "If, as Guy McCaskie suggests, most of the eastern birds found on the Pacific coast are lost and have faulty orientation mechanisms, something alarming is happening in populations of insectivorous birds. The matter merits investigation because who, for example, knows what effect persistent pesticides (which accumulate in birds' brains) might have on their ability to orient properly?" It is well known that several western species of flycatchers have been reported in the east in recent years.

Of course, the above discussion refers to fall movements of mostly young-of-the-year (Johnston, 1961). That the Raleigh bird described above represents the first spring record for the east presents a problem. It may be that a fall disperser which over-winters (and perhaps is disoriented also) may find itself in spring far removed from its "area of established distribution" (Johnston, 1961), and for many reasons (most notably lack of a mate) fails to establish a new breeding population. In other words, such an occurrence may be regarded as an extreme case of the normal phenomenon of dispersal (Johnston, 1961).

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BOOK REVIEWS

The Birds of Britain and Europe with North Africa and the Middle East

Herman Heinzel, Richard Fitter, and John Parslow. J.B. Lippincott Company, Philadelphia and New York, 1972. Fully illustrated in color. Range maps. List of accidentals. Indexed separately by common and scientific names. 336 p. 7¾" x 4¾". $7.50.

Whether or not you plan to visit one of the countries covered by this field guide, you will enjoy owning it. All the birds mentioned in the Bible and European literature are now at your finger tips—in color and with habitat sketches. If you happen to meet a straggler from Europe right here in the Carolinas, so much the better.

The format of this field guide is quite similar to that of the popular *Birds of North America* by Robbins, Bruun, Zim, and Singer. Over 1,000 birds are shown on color plates with the text for each species conveniently located on the facing page. Occasional double-page spreads illustrate many similar species for easy comparison (e.g. female ducks in flight, immature gulls). A drawing of an immature Great Black-backed Gull is incorrectly labeled "adult winter" and some of the illustrations of North American species (e.g. Parula Warbler) are less than satisfactory; but the book as a whole strikes me as being very well done. The hard-cover binding obviously is designed for durability in the field. The introductory material on identifying birds will be helpful to beginning bird students on any continent. The text includes a great deal of information on behavior and habitat preference that should be extremely helpful to the tourist bird watcher. Many juveniles and well-marked races are shown in small-scale drawings, and marginal sketches emphasize such fine points as differences in relative length of primaries between two very similar species. Measurements are given in both inches and centimeters. The range maps spare the foreigner the task of coping with unfamiliar names of geographical features and political boundaries.

This extremely well organized field guide is bound to be one of the best buys in book stores today.—EFP

Owls

Tony Angell. University of Washington Press, Seattle, Washington 98195, 1974. 63 drawings by author. Bibliography. 80 p. 8¼" x 11½". $12.95.

The author's drawings are reproduced by duotone offset lithography, which gives exactly the right muted effect appropriate for owls. In the introduction the author shows his understanding of owls as predators beautifully adapted to their way of life in the wild. The species accounts are at their best when Angell tells about his personal experiences with owls. The numerous drawings, Optima type face, spacious layouts, large page size, and attractive binding combine to make this slim book an appropriate gift for the discriminating nature lover.

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All CBC members not in arrears for dues receive *The Chat*, a quarterly journal devoted to bird study and conservation, and the *CBC Newsletter*, which carries information about meetings, field trips, and club projects. Articles intended for publication in *Chat* may be sent to the Editor or to the appropriate department editor listed in a recent issue of the bulletin. Items for the *Newsletter* should be sent to its Editor, F.M. Probst, Route 2, Box 80-C2, Pawley's Island, S.C. 29585. Correspondence regarding memberships, changes of address, or requests for back numbers of either publication should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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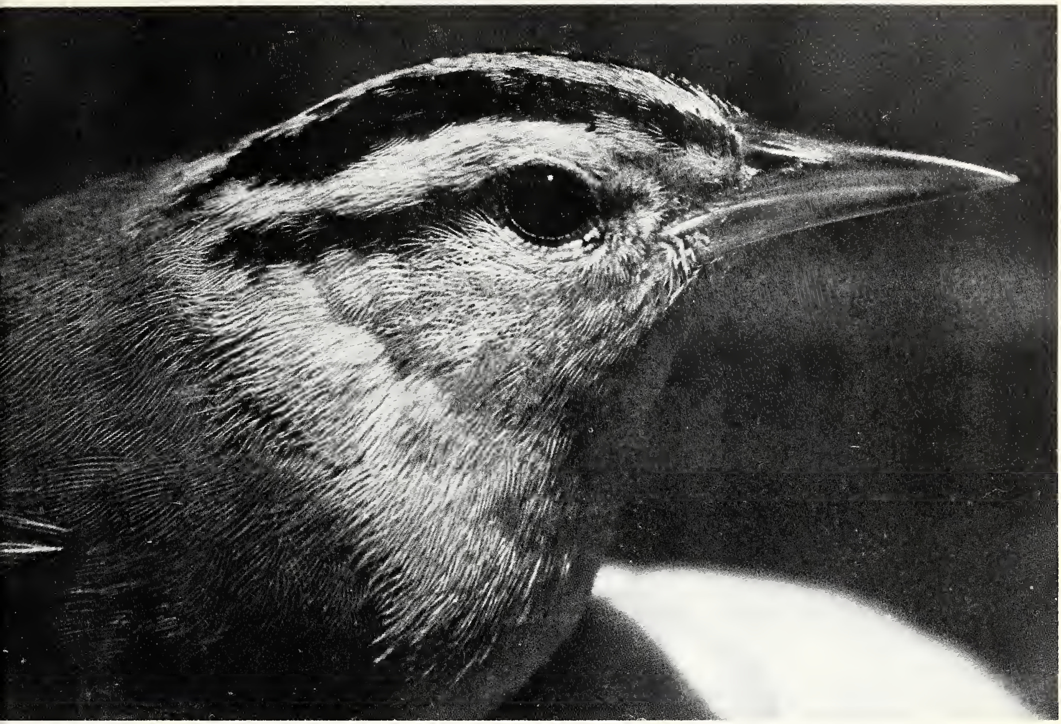

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Issued July 1975

OUR COVER—The Worm-eating Warbler was photographed by David Lee, who recently joined the staff of the North Carolina Museum of Natural History. For more information on warblers, see the major paper by Harry E. LeGrand Jr. To learn more about Dave Lee, read CBC Roundtable. This issue also features two new drawings by John Henry Dick and a photo by Edward Burroughs.

DISTRIBUTION AND ABUNDANCE OF THE WOOD WARBLERS IN NORTH CAROLINA DURING THE SPRING, NESTING, AND FALL SEASONS

HARRY E. LeGRAND JR.

The amount of published records on warblers (*Parulidae*) in North Carolina is fairly large, but a great portion of these records are rare sightings or unusual arrival and departure dates. Abundance data, even for the common species, are incomplete for all seasons, especially for the spring and fall migrations. Even though three editions of the state book, *Birds of North Carolina*, have been published (Pearson et al., 1919, 1942, 1959), very little quantitative data on warblers are found in these books. Because of this scarcity of data and the relative obsoleteness of the 1959 edition, I conducted a study on the distribution and abundance of warblers in the state during the spring and fall seasons. Nesting abundance data also were recorded for this study.

MATERIALS AND METHODS

Data for this project were collected by two methods: (1) questionnaires to selected observers who have done considerable field work in North Carolina, and (2) published records in journals, state and regional bird books, and local and regional checklists. The approximate locations of ornithological field work in North Carolina, especially as related to studies of warblers, are shown in Figure 1.

Most of the published records for North Carolina were taken from three sources: *The Chat*, *Audubon Field Notes* (now *American Birds*), and *Birds of North Carolina*. The bulk of the data in *The Chat* was taken from spring count tables, "Briefs for the Files," and county and regional annotated lists. Most North Carolina data in *Audubon Field Notes* were found in the "Southern Atlantic Coast Region" section.

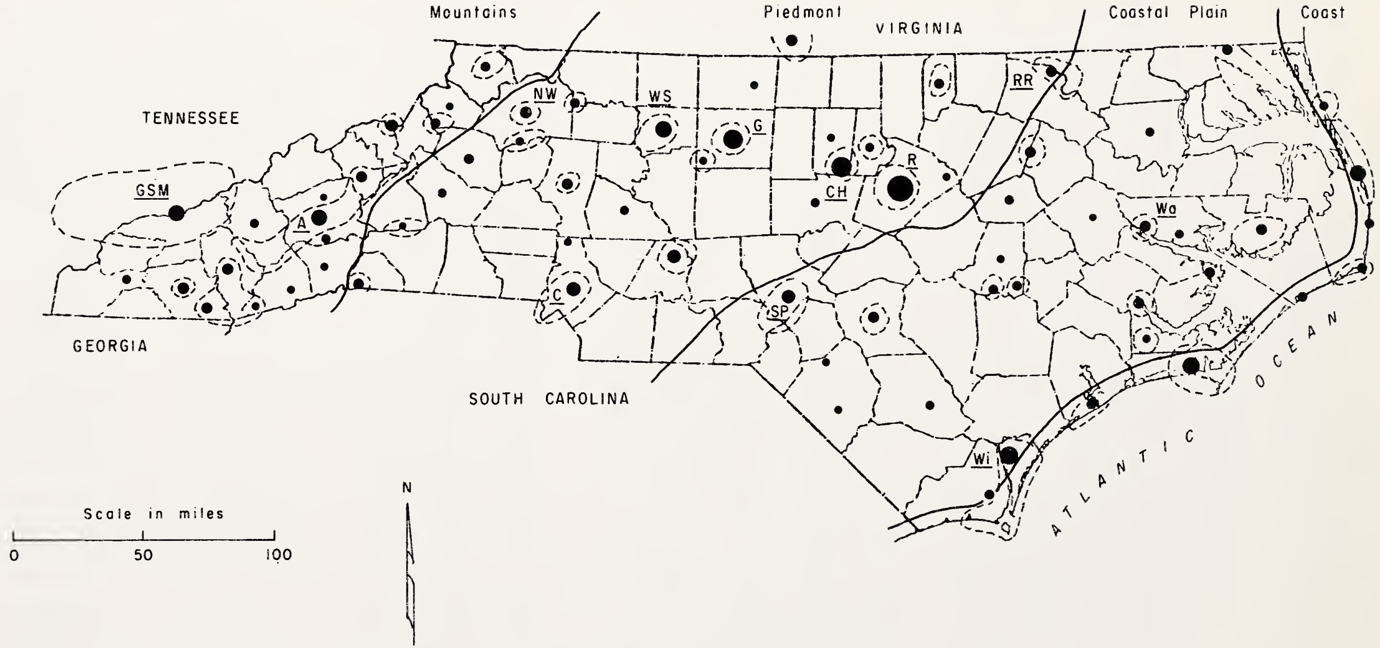
STUDY AREA

North Carolina, the study area, contains three major physiographic regions: (1) mountains, (2) piedmont, and (3) coastal plain (Radford et al., 1968). These regions lie in narrow belts in the eastern United States running in northeast-southwest directions. In addition to the above regions, another section of the state is of major importance ornithologically. The immediate coastline, consisting almost exclusively of narrow barrier islands and estuaries paralleling the mainland, and an adjacent strip of mainland of a few miles in width, have been considered a fourth region in this study—the coast (see Figure 1 for locations of these regions).

RESULTS

Figure 2 shows the abundances and distributions of the spring migrant, nesting, and fall migrant populations of the 37 regularly-occurring species of warblers in North Carolina. Several species and hybrids that have been recorded in the state are not included on this figure because they occur only casually or accidentally. These birds are the Bachman's Warbler (*Vermivora bachmanii*), Black-throated Gray Warbler (*Dendroica nigrescens*), Kirtland's Warbler (*Dendroica kirtlandii*), and the Brewster's and Lawrence's hybrids.

The abundance levels presented in this figure are based on (1) the number of birds of a given species an observer would expect to record on a 3-hour morning trip through its primary habitat, and on (2) the number of records the observer would expect to gather over a single season. The criteria for the abundance levels are: *abundant*—over 100 birds of the species recorded during the 3 hours in its primary habitat; *very com-*


Mountains
Piedmont
VIRGINIA
Coastal Plain
Coast
TENNESSEE
GSM
A
NW
WS
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CH
R
RR
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SP
Wi
GEORGIA
SOUTH CAROLINA
ATLANTIC OCEAN
Scale in miles
0
50
100
N

Fig. 1. Primary locations of ornithological field work in North Carolina (1880-1972). Solid dots are the centers of field work (the larger the dot, the more intensive the work). Dashed lines surrounding dots are approximate or estimated limits of associated field work. Abbreviations of key localities are: GSM—Great Smoky Mountains National Park, A—Asheville, NW—North Wilkesboro, WS—Winston-Salem, G—Greensboro, C—Charlotte, CH—Chapel Hill, R—Raleigh, RR—Roanoke Rapids, SP—Southern Pines, Wa—Washington, Wi—Wilmington. Boundaries of the piedmont based on Radford et al. (1968).

mon—21 to 100 birds; *common*—6 to 20 birds; *fairly common*—2 to 5 birds; *uncommon*—no more than two in a morning (except in unusual and irregular cases), generally one to several records per season each year if the observer actively birded; *rare*—seldom more than one record per season each year, one to five records over a period of 5 years; *very rare*—only one to several records expected over a 20-year period; *casual*—expected to occur only once to several times within a century; *absent*—applying primarily to breeding statuses, no records expected for the species at the locality (if a record does occur, it would be considered "accidental"). Abundances shown with two successive levels (e.g., FC-C) indicate that the abundance over the area is generally on the borderline between the two individual levels.

The status of a number of species of migrants is poorly known in the coastal plain and coast regions, especially in the spring, because of the scarcity of observers in those areas. Also, the migrant statuses of species that nest in North Carolina are poorly understood because of the difficulty in distinguishing between the migrants and the breeders. In both cases question marks have been added to Figure 2 to indicate that the abundance statuses of such species are not well known or understood.

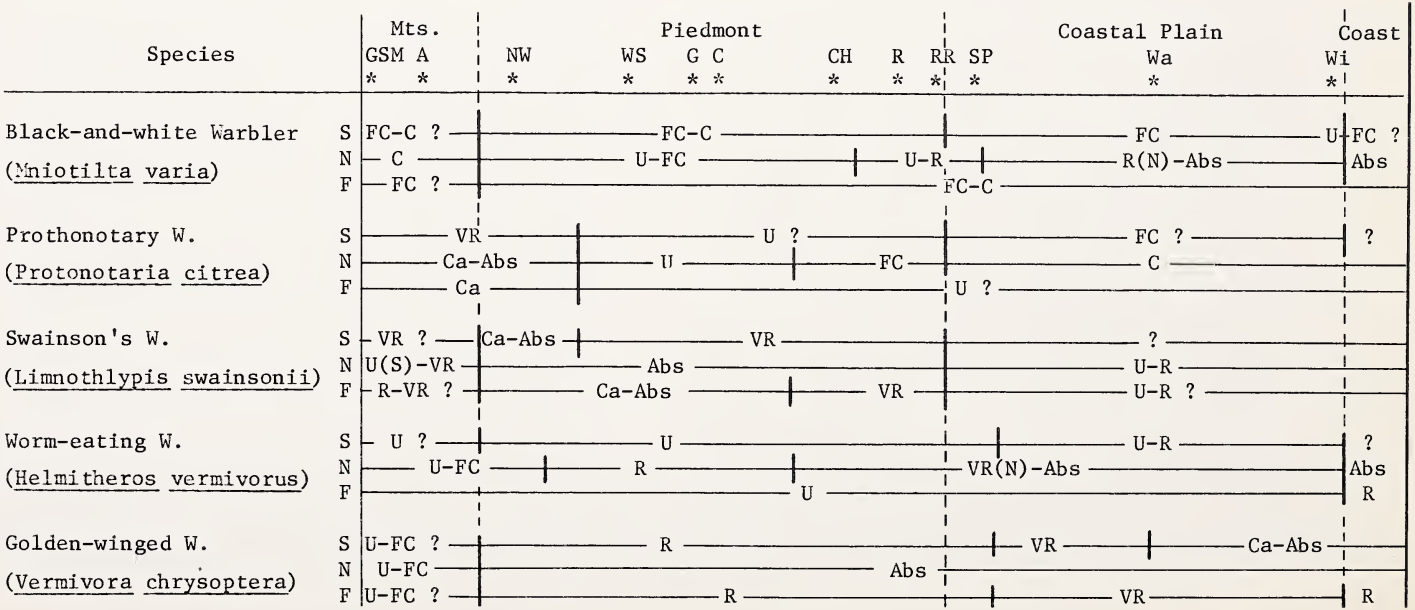
The shape of North Carolina has been converted in Figure 2 to a single east-west band covering the four regions. The widths of the mountain, piedmont, and coastal plain regions on the figure are approximately in the same proportions as their true widths; however, the width of the coast region has been increased on the figure in order to allow space for the printing of abundance statuses within its borders. The natural northeast-southwest orientation of the regions in the state has been converted to vertical lines in the figure, and since the figure represents an east-west line (no north-south dimensions), points or towns which are on the same northeast-southwest line in North Carolina occur at the same point on the figure. Note that Charlotte and Greensboro are located nearly side-by-side. The figure has been set up as such because the warbler migrations in North Carolina are primarily in northeast-southwest directions and, therefore, are similar at points on a northeast-southwest line (such as Charlotte and Greensboro).

DISCUSSION

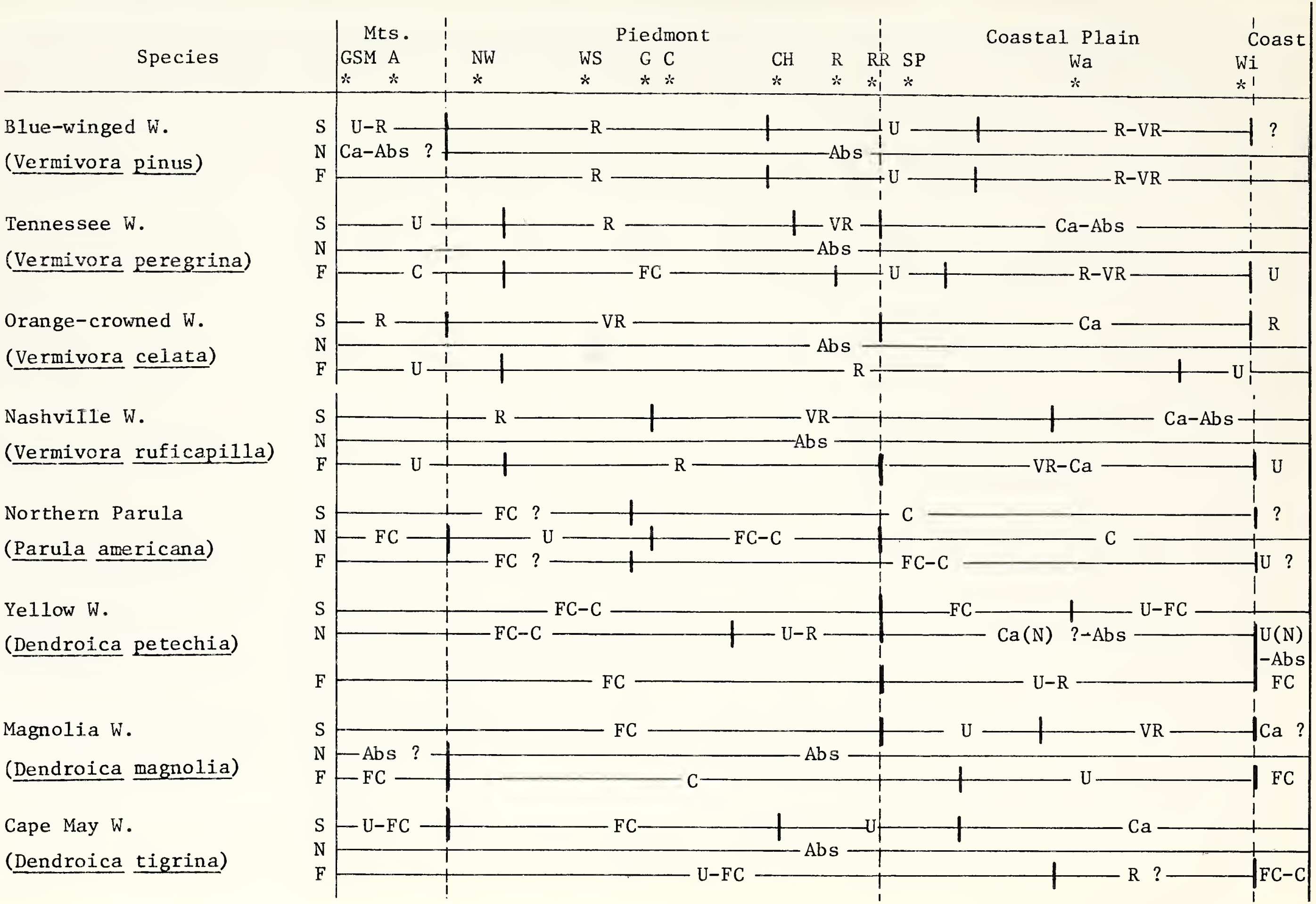
One problem which occurred in this study was the bias in abundance figures for the three seasons concerned. Warblers are more vocal and easily detected in summer than spring and in spring than fall, and since the abundance data in Figure 2 are based on number of birds recorded in the field, there is a tendency to underestimate (fail to detect) numbers of birds in the spring and fall, especially in the latter season. Therefore, for example, at a given location the *actual* numbers of a fairly common fall migrant are greater than those of a fairly common spring migrant and much greater than those of a fairly common summer resident, even though the same numbers of each are *recorded* in the proper season in a single morning.

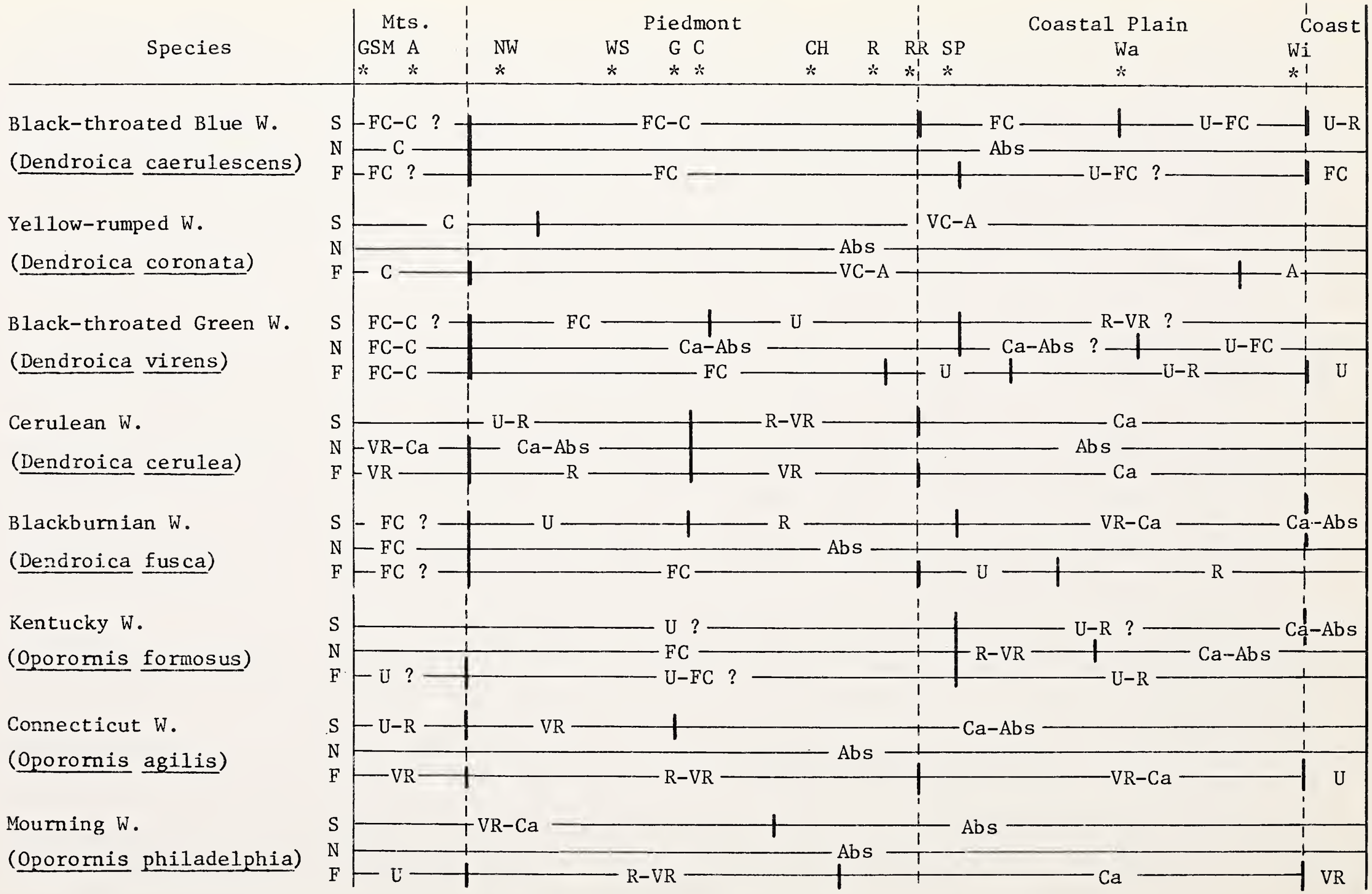
Another problem pertained to the relation of TV tower kill and airport ceilometer kill data to diurnal field data (with which this paper is concerned). Although the kill data are presumably unbiased in that they represent nearly the true proportion of warbler species and individuals that are migrating overhead, they are not necessarily the true proportion of species and individuals that are present at that location during the following day. For example, at two television towers in the coastal plain, Jay Carter (pers. com.) has found small numbers of several species of warblers that were considered rare or very rare by diurnal observers in the coastal plain. However, he has also found numbers of Seaside Sparrows (*Ammospiza maritima*) and Sharp-tailed Sparrows (*Ammospiza caudacuta*), coastal species which are only casually recorded inland by observers. His data indicate that many or most of these species are flying toward the coast with no intention of landing in the coastal plain. On the other hand, kill data of small passerines in the piedmont and mountains agree reasonably well with diurnal data in species abundances. The result of these disparities was that I incorporated

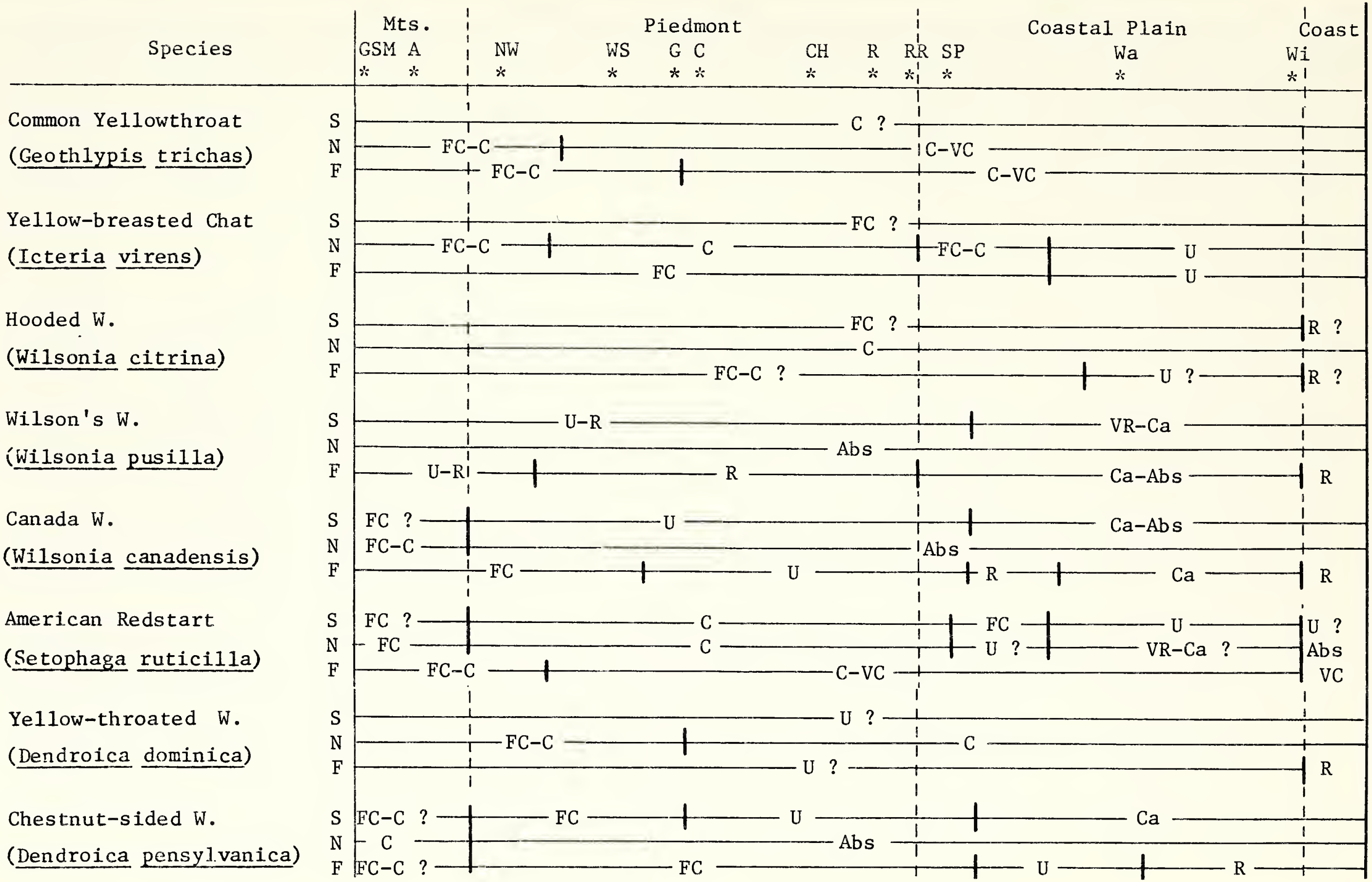
Fig. 2. Spring, nesting, and fall abundance distribution of warblers in North Carolina. Data arranged along a west to east line according to regions. The regions and abundance patterns are northeast-southwest belts in which specific localities in the second row are approximately located. Abbreviations on the second row are: GSM—Great Smoky Mountains National Park, A—Asheville, NW—North Wilkesboro, WS—Winston-Salem, G—Greensboro, C—Charlotte, CH—Chapel Hill, R—Raleigh, RR—Roanoke Rapids, SP—Southern Pines, Wa—Washington, Wi—Wilmington. Abbreviations on the left of the figure are: S—Abundance of spring transients only, N—Abundance of nesting birds, F—Abundance of fall transients only. Abbreviations within the figure are: A—Abundant, VC—Very common, C—Common, FC—Fairly Common, U—Uncommon, R—Rare, VR—Very Rare, Ca—Casual, Abs—Absent, ?—Status uncertain or unknown, (N)—Northern section, (S)—Southern section. Two abundance levels used in conjunction (e.g., FC-C) indicate a borderline abundance between the two levels. Short vertical marks are approximate locations of abundance changes.

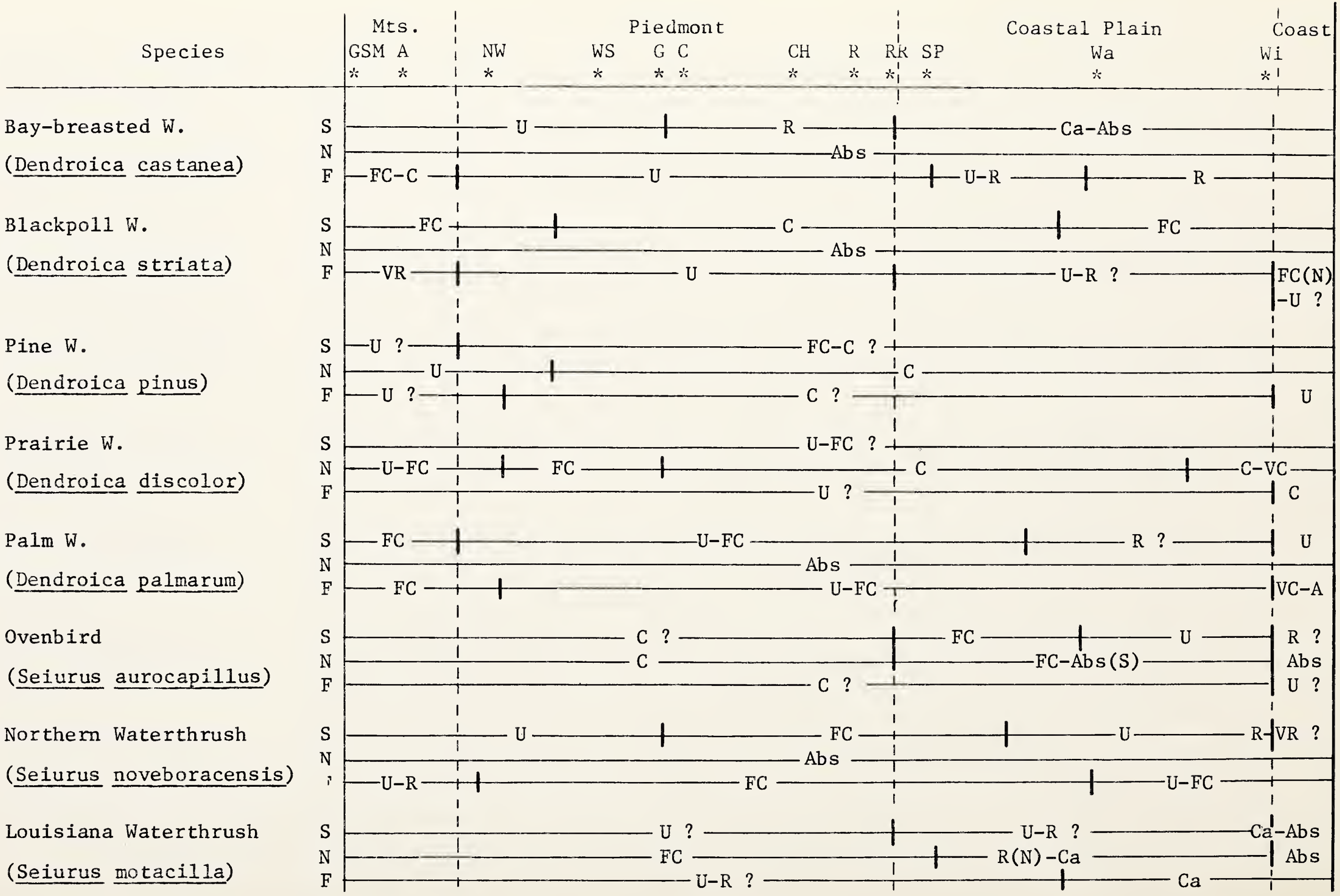


Species
Mts.
GSM A
Piedmont
NW WS G C CH R RR SP
Coastal Plain
Wa
Coast
Wi
Black-and-white Warbler
(Mniotilta varia)
S FC-C ? FC-C FC U-FC ?
N C U-FC U-R R(N)-Abs Abs
F FC ? FC-C
Prothonotary W.
(Protonotaria citrea)
S VR U ? FC ? ?
N Ca-Abs U FC C
F Ca U ?
Swainson's W.
(Limnothlypis swainsonii)
S VR ? Ca-Abs VR ?
N U(S)-VR Abs U-R
F R-VR ? Ca-Abs VR U-R ?
Worm-eating W.
(Helmitheros vermivorus)
S U ? U U-R ?
N U-FC R VR(N)-Abs Abs
F U R
Golden-winged W.
(Vermivora chrysoptera)
S U-FC ? R VR Ca-Abs
N U-FC Abs
F U-FC ? R VR R


Species
Mts.
GSM A
Piedmont
NW WS G C CH R RR
Coastal Plain
SP Wa
Coast
Wi
Blue-winged W.
(Vermivora pinus)
S U-R R U R-VR ?
N Ca-Abs ? Abs
F R U R-VR
Tennessee W.
(Vermivora peregrina)
S U R VR Ca-Abs
N Abs
F C FC U R-VR U
Orange-crowned W.
(Vermivora celata)
S R VR Ca R
N Abs
F U R U
Nashville W.
(Vermivora ruficapilla)
S R VR Ca-Abs
N Abs
F U R VR-Ca U
Northern Parula
(Parula americana)
S FC ? C ?
N FC U FC-C C
F FC ? FC-C U ?
Yellow W.
(Dendroica petechia)
S FC-C FC U-FC
N FC-C U-R Ca(N) ?-Abs U(N) -Abs
F FC U-R FC
Magnolia W.
(Dendroica magnolia)
S FC U VR Ca ?
N Abs ? Abs
F FC C U FC
Cape May W.
(Dendroica tigrina)
S U-FC FC U Ca
N Abs
F U-FC R ? FC-C


Species
Mts.
GSM A
Piedmont
NW WS G C CH R RR
Coastal Plain
SP Wa
Coast
Wi
* * * * * * * * * * * *
Black-throated Blue W. (Dendroica caerulescens)
S FC-C ? FC-C FC U-FC U-R
N C Abs
F FC ? FC U-FC ? FC
Yellow-rumped W. (Dendroica coronata)
S C VC-A
N Abs
F C VC-A A
Black-throated Green W. (Dendroica virens)
S FC-C ? FC U R-VR ?
N FC-C Ca-Abs Ca-Abs ? U-FC
F FC-C FC U U-R U
Cerulean W. (Dendroica cerulea)
S U-R R-VR Ca
N VR-Ca Ca-Abs Abs
F VR R VR Ca
Blackburnian W. (Dendroica fusca)
S FC ? U R VR-Ca Ca-Abs
N FC Abs
F FC ? FC U R
Kentucky W. (Oporornis formosus)
S U ? U-R ? Ca-Abs
N FC R-VR Ca-Abs
F U ? U-FC ? U-R
Connecticut W. (Oporornis agilis)
S U-R VR Ca-Abs
N Abs
F VR R-VR VR-Ca U
Mourning W. (Oporornis philadelphia)
S VR-Ca Abs
N Abs
F U R-VR Ca VR


Species
Mts.
GSM A
Piedmont
NW WS G C CH R RR
Coastal Plain
SP Wa
Coast
Wi
Common Yellowthroat
(Geothlypis trichas)
S C ?
N FC-C C-VC
F FC-C C-VC
Yellow-breasted Chat
(Icteria virens)
S FC ?
N FC-C C FC-C U
F FC U
Hooded W.
(Wilsonia citrina)
S FC ? R ?
N C
F FC-C ? U ? R ?
Wilson's W.
(Wilsonia pusilla)
S U-R VR-Ca
N Abs
F U-R R Ca-Abs R
Canada W.
(Wilsonia canadensis)
S FC ? U Ca-Abs
N FC-C Abs
F FC U R Ca R
American Redstart
(Setophaga ruticilla)
S FC ? C FC U U ?
N FC C U ? VR-Ca ? Abs
F FC-C C-VC VC
Yellow-throated W.
(Dendroica dominica)
S U ?
N FC-C C
F U ? R
Chestnut-sided W.
(Dendroica pensylvanica)
S FC-C ? FC U Ca
N C Abs
F FC-C ? FC U R


Species
Mts.
GSM
A
Piedmont
NW
WS
G
C
CH
R
RR
SP
Coastal Plain
Wa
Coast
Wi
Bay-breasted W.
(Dendroica castanea)
S
N
F
U
R
Ca-Abs
Abs
FC-C
U
U-R
R
Blackpoll W.
(Dendroica striata)
S
N
F
FC
C
FC
Abs
VR
U
U-R ?
FC(N)
-U ?
Pine W.
(Dendroica pinus)
S
N
F
U ?
FC-C ?
U
C
U ?
C ?
U
Prairie W.
(Dendroica discolor)
S
N
F
U-FC ?
U-FC
FC
C
C-VC
U ?
C
Palm W.
(Dendroica palmarum)
S
N
F
FC
U-FC
R ?
U
Abs
FC
U-FC
VC-A
Ovenbird
(Seiurus aurocapillus)
S
N
F
C ?
FC
U
R ?
C
FC-Abs(S)
Abs
C ?
U ?
Northern Waterthrush
(Seiurus noveboracensis)
S
N
F
U
FC
U
R
VR ?
Abs
U-R
FC
U-FC
Louisiana Waterthrush
(Seiurus motacilla)
S
N
F
U ?
U-R ?
Ca-Abs
FC
R(N)-Ca
Abs
U-R ?
Ca

data from the piedmont into the material in Figure 2 but mostly ignored the coastal plain kill data because of its misleading character.

The large number of question marks which appear on Figure 2 and the scarcity or lack of field work in many areas of North Carolina as shown on Figure 1 indicate that much is still to be learned about warbler distributions in the state. Relatively little field work has been conducted in the coastal plain region, both because of the scarcity of observers and the poverty of migrants in this region. Our knowledge of birds (of all species) north of a line from Rocky Mount to Lake Mattamuskeet and south of a line from Charlotte to New Bern (excepting the Wilmington area) is nearly lacking. Other areas of the state needing intensive field work in the near future include the northern border counties west of Henderson and the counties lying between Asheville and Charlotte. Intensive birding in counties in the corners of the state is also needed and could yield new or important breeding records.

ACKNOWLEDGMENTS

This paper could not have been written without the valuable data submitted by a large number of contributors, and those who submitted a substantial amount of data are marked below by asterisks. I wish to thank Edna Appleberry*, Jeannette S. Bachman*, Elizabeth Ball, Charles H. Blake*, J. H. Carter III*, Geraldine Cox*, Vera Crook, Dot Earle, Mary Enloe, Oliver W. Ferguson, Charles M. Frost, John O. Fussell III*, Gaston Gage, Gilbert S. Grant, Jeanne Halsey, Fred S. Hill, Robert P. Holmes*, J. Merrill Lynch*, James R. Mattocks*, James L. and Mary McLaurin, William A. Noonan, Mrs. Paul S. Payne*, Richard A. Peake Jr.*, Eloise F. Potter*, James O. Pullman*, Robert C. Ruiz, Marcus B. Simpson Jr.*, Wendell P. Smith*, Ramona R. Snavely*, Thomas E. Street*, Robert P. and Elizabeth P. Teulings*, Plumer W. Wiseman, and Robert H. Witherington. I express my greatest appreciation to these people for the valuable time they spent researching and compiling their warbler records and for their sincere interest in my study.

This paper is based on part of a thesis submitted in partial fulfillment of the requirements for the Master of Science degree in Zoology at North Carolina State University, Raleigh, N.C., 1973. My Graduate Advisory Committee members were: T.L. Quay (chairman), K.E. Muse, and S.D. Koch.

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331 Yadkin Drive, Raleigh, N.C. 27609, 23 March 1974. [Present address: Department of Zoology, Clemson University, Clemson, S.C. 29631.]

ADDENDA

Figure 2 was compiled during the spring of 1973. Since that time, a number of changes in warbler distributions have been recorded in North Carolina, due both to actual changes in warbler populations and to ornithological field work in poorly-covered areas.

SWAINSON'S WARBLER: Recent summer records from Swift Creek just south of Raleigh in Wake County, and records from Polk County over many years indicate that the species breeds or may breed sparingly along the eastern and western borders of the piedmont. The current breeding status in the coastal plain perhaps should be listed as "uncommon" rather than "uncommon to rare."

BLUE-WINGED WARBLER: Recent breeding season records for Cherokee and Graham Counties indicate that the species is not a rare bird in the southwestern tip of the state; nevertheless, elsewhere in the mountains it is a very rare to absent breeding species. The Blue-winged seems to have increased somewhat as a migrant, throughout the state, within the last few years.

TENNESSEE WARBLER, CAPE MAY WARBLER, and BAY-BREASTED WARBLER: These three species have increased considerably in numbers as migrants through North Carolina in the last several years, especially in the mountain and piedmont sections. The migrant abundance statuses listed on the table for these species should be increased one level (change "U" to "FC," "FC" to "C," etc.) in the mountains and piedmont.

CERULEAN WARBLER: Field studies in key areas of the state have revealed sizable breeding populations in several localities. Small colonies have been found along the Blue Ridge in northeastern Wilkes County and in western Polk County, and a large population exists in the western coastal plain along the Roanoke River in the Halifax area, with smaller numbers downstream to Williamston (Merrill Lynch, pers. com.). Information on the breeding distribution of this species in the state is quite incomplete.

YELLOW-THROATED WARBLER: Either this species has declined considerably as a breeder, especially west of the fall line, or the data I accumulated were incorrect. This warbler now appears to be only uncommon to fairly common as a breeding species in most localities west of the fall line. The spring status of the species should be listed as "fairly common" in the eastern half of the piedmont, and probably also in the coastal plain.

CHESTNUT-SIDED WARBLER: Change the nesting status in the mountains from "common" to "very common."

KENTUCKY WARBLER and AMERICAN REDSTART: The abundance and distribution of these (and many) warblers in the coastal plain in summer are not well known. Large numbers of these two species along the Roanoke River in the Halifax area suggest they may well be more numerous than previously suspected in the western section of the coastal plain, at least north of the Tar River. The Kentucky Warbler is scarce to absent in the eastern coastal plain in summer, north of the Neuse River, but south of this river it may be a regular but uncommon to rare breeding bird.

BOOK REVIEW

Ocean Wanderers: The Migratory Sea Birds of the World

R.M. Lockley. Published in Great Britain and Canada by David & Charles Limited and in the United States by Stackpole Books, Harrisburg, Pa. 1974. Drawings by Robert Gillmor, 8 color plates, 28 black-and-white photographs, 20 distribution maps. Bibliography. Index. 168 p. 8″ x 10¼″. $15.00.

The recent increase in the number of bird watchers making boat trips off the Carolina coast has stimulated interest in pelagic species among CBC members, many of whom may find *Ocean Wanderers* enjoyable and informative. Lockley introduces the layman to the physiology, life histories, and migratory movements of the birds of the oceans all over the world. The 13 chapter headings are Origin and evolution; Adaptations to ocean-going; Behavior; Ocean feeding grounds; Expert navigators; Man and sea birds; Penguins; Albatrosses; Fulmars, shearwaters and other petrels; Tropic and frigate birds, gannets and boobies; Skuas, gulls and terns; Auks; and Phalaropes. The author's command of his subject matter is impressive, and he writes with ease and enthusiasm even when the ideas become a bit complex. This is a book for the advanced bird student who is willing to dig for the facts. Assuming his readers are intelligent people who are trying to learn something meaningful about sea birds, Lockley never writes down to them. Because most readers probably will have seen only a few of the many species he mentions, I wish the author had been able to include more photographs, drawings, and range maps without making the book prohibitively expensive. An appendix that could serve as a guide to the birds of the oceans would be most welcome. The reader who knows his own limitations might do well to acquire W.B. Alexander's *Birds of the Oceans* (Putnam, 1963) along with *Ocean Wanderers.*—EFP

General Field Notes

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An Inland South Carolina Record for the White-winged Scoter

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On 12 November 1967, James Sweeney, John Sweeney, and I went to the dam of Par Pond on the AEC Savannah River Plant, Barnwell County, S.C., to census wintering ducks. Soon after arriving we noticed a strange duck feeding near a small group of Ruddy (*Oxyura jamaicensis*) and Lesser Scaup (*Aytha affinis*) Ducks in deep water near the spillway. As we moved closer, the whole group began to drift slowly away from the dam. Upon observing the unusual duck at 15X with a spotting scope, we identified it as a female White-winged Scoter (*Melanitta deglandi*). The white wing patch was clearly visible while she rested on the water. We visited the spot again the next day and periodically for the next 2 months and always found the bird feeding or loafing near the dam, either alone or in the company of a small number of other divers. Because she always moved away by swimming, we thought at first that she may have been injured. However, on 12 December, when we rapidly approached the spot on the dam opposite her position in the water, she flushed and, after striding clear of the water, flew strongly for several hundred yards before alighting. No others of the species ever were observed, and she had disappeared by February.

Sprunt and Chamberlain (*South Carolina Bird Life*, 1970, p. 590) classified the White-winged Scoter as a rare winter visitor on the coast and gave only two inland records, both in the piedmont. Burleigh (*Georgia Birds*, 1958, p. 698) gave a record of a male on the

Savannah River near Augusta in January 1954, and Quay et al, (*Chat*, 33:27) reported one inland at Raleigh, N.C., in November 1968. No record of a bird wintering inland in any of these three states could be found. Norris (*Birds of the AEC Savannah River Area*, 1963) listed no scoters at SRP, so these observations constitute a new record for the area.

[There are at least three additional inland records of this species for North Carolina. Joyner (*Chat*, 21:70) reported a female at Rocky Mount in January 1957; Hader (*Chat*, 33:57) listed the record of Quay et al., plus another for the Raleigh area in November 1947; and Carter (*Chat*, 35:94) mentions one seen at Lakeview in the central sandhills area in October 1960. Although there are no definite records of White-winged Scoters wintering inland in the Carolinas or Georgia, one of the piedmont records (Shuler, *Chat*, 18:96) is that of an individual that appeared on Union Bleachery Reservoir in Greenville, S.C., on 12 March 1950, and stayed in the area for 12 days.—JRH]

Peregrine Falcon Harasses Red-tailed Hawk

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During field reconnaissance in Fairfield County, S.C., near the eastern edge of the Sumter National Forest, on 11 September 1974, I observed two raptors soaring over open fields at about 0.4 km from me. As I watched, the smaller bird, which I identified as a Peregrine Falcon (*Falco peregrinus*), dove from its higher position at a Red-tailed Hawk (*Buteo jamaicensis*). The Red-tail set its wings and veered upward and slightly sideways as the Peregrine passed within what appeared to be around 30 cm, with its talons outstretched.

After completing the dive, the Peregrine flew up to nearly its original height, above the Red-tail. Seconds later the entire performance was repeated, and then again and again for a total of five harassments. However, after each dive, the Peregrine never regained the same height above the Red-tail.

At the Peregrine's sixth dive, the Red-tail turned and met the harasser by rising slightly in the air and then dove with outstretched talons at the Peregrine as it flew by. This was the last harassment I saw, as both birds had flown a greater distance away during the activities, until they were no longer easily visible.

Sandhill Crane and Albino Owl in Charleston County, S.C.

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On 23 December 1973, my son Robert and I were hunting ducks in Mayrant's Reserve on Fairlawn Plantation, Charleston County, S.C., and for several hours had the opportunity to observe a Sandhill Crane that would occasionally circle around and over the reserve for 10 to 15 minutes at a time. Its loud call was easily distinguished from that of the Great Blue Heron, one of which was in the area at the same time. The weather, as I recall, was very cold with ice on the water most of the morning. That afternoon we returned and once again saw what we assumed to be the same bird. I have hunted Mayrant's Reserve every weekend of the duck season since about 1960, and to my knowledge this is the first and only observation of a Sandhill Crane.

On a completely different note, my wife and I were on Edisto Island, Charleston County, the weekend of 15-16 March 1975, and while walking through a stand of planted pine trees, flushed a white owl which I would identify as an albino Barred Owl. We both got a good look at the bird as it flew over our heads in an attempt to get over the tops of the closely planted pines. I very distinctly noted the round earless head and white back. My wife noted brown spots on its breast. My impression was that the bird was small for a Barred Owl, a species with which I am very familiar. It was not large enough to consider the possibility of a Snowy Owl. Almost every night during the summer we heard Barred Owls hooting from this same patch of woods.

[The smaller size of this owl, together with the brown spots on its breast, make it likely that it was an albino Barn Owl rather than a Barred.—JRH, JFP]

The Nesting Season Status of the Blue-winged Warbler in the Carolinas

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12 July 1974

NORTH CAROLINA—The only published evidence that the Blue-winged Warbler (*Vermivora pinus*) nests or nested in North Carolina was a vague statement in *Birds of North Carolina* (Pearson, Brimley, and Brimley, 1942) that Coues reported it as breeding in Buncombe County, presumably in the 1880s and 1890s. *Birds of North Carolina* (1959 edition) listed a June record for Mt. Mitchell in Yancey County but, of course, supplied no details. Despite fairly extensive field work in the mountains during this century, nothing has been published concerning the occurrence of the Blue-winged Warbler during the breeding season. However, on 14 June 1968 Mary Enloe recorded a Blue-winged Warbler on a Breeding Bird Survey route in northwestern Graham County (data courtesy of the Migratory Bird Populations Station in Laurel, Maryland). Also, Eloise Potter observed a non-singing Blue-winged on 11 July 1964 (see article below) near Fontana Village in northern Graham County. She believed the bird was on territory. Since the three counties in the southwestern corner of the state (Graham, Cherokee, and Clay) generally have been neglected by ornithologists and the species occurs sparingly in northern Georgia (*Georgia Birds*, 1958), I believed that the Blue-winged might be widespread in this part of North Carolina, yet occur nowhere else in the state in the summer.

On 20 June 1974 I surveyed roadside habitats from southwestern Clay County to western Cherokee County, looking and listening strictly for Blue-winged Warblers. Beginning at Warne in Clay County at 06:15, I proceeded into Cherokee County and through Ranger, Suit, Hiwassee Dam, Unaka, and ending at Murphy at 11:00. I recorded five Blue-wings, all singing, at four places in Cherokee County, but none in Clay County. One bird was a mile SE of Suit and two were 3 miles N of Suit. Another was 2 miles W of Unaka, and the last was 1 mile W of Unaka. Three of the males were seen by using a tape recording of the song to bring the birds within 30 feet of me.

Practically the whole route censused lies between 1,500 and 2,000 feet, and the five birds were found between 1,650 and 1,800 feet. All birds were in basically the same habitat—overgrown fields with scattered deciduous saplings from 3 to 15 feet high on fairly level to gently sloping ground. None were found where the saplings formed a thicket. In general, the birds sang from trees on the edge of the field, 10 to 25 feet up in the trees, and only occasionally sang from the saplings in the field.

I saw no evidence of nesting, but the males were obviously on territory and presumed to be nesting. Thus, at the present time, the Blue-winged Warbler can be called a summer resident in the western halves of Graham and Cherokee counties, even though actual evidence of nesting is lacking.

SOUTH CAROLINA—On 12 June 1974 I found a singing Blue-winged Warbler along Eighteenmile Creek approximately 3 miles ESE of Central, S.C., in extreme southern Pickens County (elevation, 750 feet). I heard the song twice before I got a 3-second glance at the bird about 40 feet high in a deciduous tree at the edge of a powerline clearing. About 30 seconds after I saw the bird, it flew across the clearing (a low and shrubby thicket) and emitted an unusual jumble of notes and buzzes while it was in midair! The warbler landed in trees on the other side of the clearing and was lost from view.

On 13 June I returned to the area and heard the bird singing about 10 times from trees along the edge of the clearing; however, I was unable to locate the bird. On 15 June the bird was heard singing about four times but could not be seen. I made several other trips to the area later in June but neither saw nor heard the warbler.

This is the first breeding season record for the Blue-winged Warbler in South Carolina. Even though the bird was on territory, the record should not be considered a breeding range extension because it most likely was an unmated male at least 50 miles to the east and southeast of the normal nesting range.

A Blue-winged Warbler Seen in Summer Near Fontana Village, N.C.

ELOISE F. POTTER
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17 June 1974

The following report is submitted for publication at the suggestion of Harry E. LeGrand Jr., who recently completed an intensive study of wood warbler distribution in North Carolina. From 10 through 12 July 1964, I birded in the vicinity of Fontana Village, Graham County, N.C., while waiting for my husband to hike a section of the Appalachian Trail which passes across Fontana Dam. During these three days I hiked trails near the village (2,000 feet) and the dam (1,700 feet) and made one field trip the morning of 11 July without benefit of a trail. From a point on NC 28 about halfway between the village and the dam, I descended the gorge below the dam as far as seemed safe for me to proceed alone. Near the highway at the edge of a brushy clearing beneath power lines, I noted a male Blue-winged Warbler (*Vermivora pinus*) and a male Black-throated Green Warbler (*Dendroica virens*). About the time I decided to retrace my route, I saw an Ovenbird (*Seiurus aurocapillus*) foraging beneath some laurels and rhododendrons growing near, but not immediately beside, a small stream. When I squeaked in an attempt to lure the Ovenbird closer to me, two brown birds emerged from a dense thicket to peer at me. One I readily identified as a Worm-eating Warbler (*Helmitheros vermivorus*); and the other, after due consultation with my Peterson field guide, I determined to be a Swainson's Warbler (*Limnothlypis swainsonii*). The birds were very tame, seeming to be more curious than afraid. Although the Swainson's and Worm-eating Warblers soon slipped again into the depths of the impenetrable thicket bordering the stream, the Ovenbird continued to forage without seeming to be aware of my presence. When I returned to the roadside, the Blue-winged and Black-throated Green Warblers were exactly where I had seen them earlier in the morning. My impression was that all these birds were on territory. Other wood warblers seen on my rambles around Fontana included the Black-and-white, Northern Parula, Yellow, Kentucky, and Hooded Warblers and the American Redstart.

Comments on the Field Identification of Sharp-tailed Sparrows

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31 December 1974

LeGrand (*Chat*, 38:76) recently reported the occurrence of Nelson's Sharp-tailed Sparrow (*Ammospiza caudacuta nelsoni*) in Anderson County, S.C. The subspecies identification was based upon field observations of two birds seen near Townville, 19 May 1974.

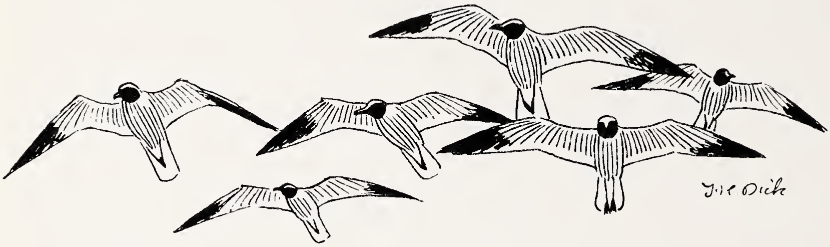
The A.O.U. *Check-list of North American Birds* (1957, 5th edition) lists the following races of the Sharp-tailed Sparrow: Eastern (*Ammospiza caudacuta caudacuta*), Acadian

(*A.c. subvirgata*), Southern (*A.c. diversa*), James Bay (*A.c. altera*), and Nelson's (*A.c. nelsoni*). The occurrence of all five races in South Carolina is documented by specimens in the Charleston Museum. To say that field identification of two or three of the races is questionable, is an understatement.

Among writers commenting on this difficult group, Peterson (1947, *A Field Guide to the Birds*, p. 272) notes the similarity of the Nelson's and James Bay races, and says that "Most of the migrants that were once called *nelsoni* in N.Y. and N.E. are probably of this race [James Bay]. Sight records cannot be accepted." Hill (*in* Bent, *Life Histories of North American Cardinals, Grosbeaks, Buntings, Towhees, Finches, Sparrows, and Allies*, 1968) states that "... without the specimen in hand, and without adequate skins for comparison, it is my opinion that *diversa* vs *caudacuta* are inseparable, as are *subvirgata* vs *altera*, *altera* vs *nelsoni*, and perhaps *nelsoni* vs *caudacuta*." Further, that "In the field, *altera* cannot be separated from *subvirgata* on one hand, or from *nelsoni* on the other; even with the specimen in hand the diagnosis is difficult and sometimes impossible."

During the preparation of the first edition of *South Carolina Birdlife* (1949), the late H.C. Oberholser examined critically the Charleston Museum's specimens of Sharp-tailed Sparrows, in addition to those of many other species. His opinions concerning the identification of Sharp-tailed Sparrow races are reflected in the paragraph above.

In view of the uncertainties involved, compilers and researchers cannot be expected to accept sight record identifications of Sharp-tailed Sparrow subspecies.



BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514

(Winter season, 1974-1975)

COMMON LOON: Inland, 22 were tallied at Roanoke Rapids Lake, Halifax County, N.C., on 4 January by Merrill Lynch.

RED-NECKED GREBE: One was a rare visitor on the South Carolina coast sighted in Charleston harbor on 9 March by Sidney Gauthreaux and Harry LeGrand.

HORNED GREBE: An impressive inland count of 196 was recorded by Merrill Lynch at Roanoke Rapids Lake, N.C., on 2 January.

DOUBLE-CRESTED CORMORANT: Four were uncommon inland visitors at Lake Wheeler near Raleigh, N.C., observed on 30 March by James Mulholland.

LITTLE BLUE HERON: Three were noted on 24 March at Townville, S.C., by Harry LeGrand, a seasonally early occurrence for the species in that western piedmont locality.

CATTLE EGRET: Nine late lingerers were observed near Grandy in coastal Currituck

County, N.C., on 14 December by Robert Tripician. Elsewhere three were reported by John Fussell to have overwintered on Bogue Bank in the vicinity of Atlantic Beach, N.C. Another was seen near McClellanville, S.C., on 24 January by Dennis Forsythe.

WHITE IBIS: A winter occurrence of an individual was recorded as far north as Buxton on the North Carolina Outer Banks on 18 February by Fred Pongrace, fide Joe Hudick.

GLOSSY IBIS: Seven were seen at Pea Island N.W.R. on 8 February by Robert Tripician, and small numbers lingered in the Charleston, S.C., area through the winter, as reported by Dennis Forsythe.

WHISTLING SWAN: Mattamuskeet N.W.R. in Hyde County, N.C., continued to attract a high wintering population of swans with a peak count of 18,000 recorded there in early December, fide Don Harke. Up to 200 also wintered at Pea Island N.W.R. according to census data furnished by Jack Hagan. A few wandered as far south as Cape Romain N.W.R. and Charleston along the South Carolina coast. Inland, scattered and uncommon piedmont occurrences were noted during the winter at Reidsville, Roanoke Rapids, Seaforth, and Whispering Pines, N.C.

SNOW GOOSE: Jack Hagan reported a peak winter concentration of 7,200 at Pea Island, N.W.R., including 25 birds of the blue form. At Garysburg, N.C., two of the latter form were seen on 5 January by Merrill Lynch and eight were noted on 19 January at South Island near Georgetown, S.C., by Ted Beckett.

WHITE-FRONTED GOOSE: One was seen at Santee N.W.R. on 18 February by Dennis Forsythe.

FULVOUS TREE DUCK: Nine were seen in a small flock at Magnolia Gardens near Charleston, S.C., on 8 February by Ted Beckett. In addition, three were recorded farther north at Bells Island, Currituck County, N.C., on 5 April by Frank Aycock, and 17 were seen at Cape Hatteras, N.C., on 7 April by Clay Gifford.

NORTHERN SHOVELER: Four were uncommon inland visitors at Raleigh, N.C., observed at Inwood Pond on 8 February by James Mulholland. Two were also seen inland at Clemson, S.C., on 24 March by Harry LeGrand.

GREATER SCAUP: Locally uncommon occurrences were recorded at Lake Wheeler near Raleigh, N.C., where 18 were seen on 10 March by James Mulholland and four at Pendleton, S.C., on 29 March by Harry LeGrand.

OLDSQUAW: One was present inland at Clemson, S.C., 22-24 January, fide Harry LeGrand.

COMMON GOLDENEYE: Two were seen on the coast at Mt. Pleasant, S.C., on 21 January by Dennis Forsythe. Inland, one was found at Roanoke Rapids Lake in Halifax County, N.C., on 3 January by Merrill Lynch, and another was seen at Lake Surf near Vass, N.C., on 14 March by Jay Carter.

COMMON EIDER: A lone winter visitor was observed at Pea Island N.W.R. on the North Carolina Outer Banks on 27 December by John Williamson. At Charleston, S.C., one was seen at Fort Sumter on 9 March by Dennis Forsythe et al., and another sighting of the same or another individual was noted by Julian Harrison at Fort Moultrie on 20 March.

COMMON MERGANSER: One was seen near Morehead City, N.C., on 19 December by John Fussell. Elsewhere, three were found inland at Kerr Scott Reservoir near North Wilkesboro, N.C., by Wendell Smith on 3 January, and four were seen on the same date at Roanoke Rapids Lake in Halifax County, N.C., by Merrill Lynch.

ROUGH-LEGGED HAWK: One was observed by Stanley Alford and Angelo Capparella at Seaforth in Chatham County, N.C., on 8 March; later seen by many observers.

BALD EAGLE: An inland sighting of an immature bird was recorded at Townville, S.C., on 8 December by Sidney Gauthreaux and Harry LeGrand, and one was reported to have wintered at Davis Impoundment near Beaufort, N.C., by Robert Hader and Eugene Pond. On 19 January, Ted Beckett found a pair of nesting adults with young at South Island near Georgetown, S.C.

PEREGRINE FALCON: Reports by several observers indicated the presence of at least two individuals in the Georgetown-Cape Romain, S.C., area during early January. Also, an individual was seen inland in Warren County, N.C., on 31 January by Michael Schultz.

MERLIN: One was sighted in Edgecombe County, N.C., near Rocky Mount on 14 December by Louis Fink, and two were seen at Davis Impoundment near Beaufort, N.C., on 11 March by Robert Hader.

SANDHILL CRANE: One was seen flying over the Clemson University campus at Clemson, S.C., on 2 December by Sidney Gauthreaux, Harry LeGrand, and Frank Moore. Four were noted later in the Georgetown area at South Island on 19 January by Ted Beckett.

BLACK RAIL: One was a good find at Kiawah Island near Charleston, S.C., on 26 January by David Chamberlain.

COMMON SNIPE: An estimated 300 were seen at Magnolia Gardens near Charleston, S.C., on 13 February by Ted Beckett. Elsewhere, at Raleigh, N.C., at least 100 were present at Greenview Farm on 28 March, observed by Robert Hader.

PURPLE SANDPIPER: A good count of 20 was recorded on the north jetties of Winyah Bay at Georgetown, S.C., on 8 December by John E. Cely.

DUNLIN: Two were late lingerers at Lake Hartwell near Clemson, S.C., through early January, fide Harry LeGrand.

RED PHALAROPE: A flock of 28 were well seen near shore from a fishing pier at Wrightsville Beach, N.C., on 26 January by Jim Weigand. This unusual midwinter sighting followed a coastal storm.

POMARINE JAEGER: An individual in light-phase plumage was seen 2 miles off the Charleston, S.C., jetties on 9 March by Dennis Forsythe et al.

RING-BILLED GULL: Up to 4,200 wintered inland at Roanoke Rapids Lake in Halifax County, N.C., as reported by Merrill Lynch.

BONAPARTE'S GULL: Two inland transients were noted at Lake Surf near Vass, N.C., on 9 December by Jay Carter. On 22 March four were seen at Lake Wheeler near Raleigh, N.C., by Robert Hader.

FORSTER'S TERN: An uncommon inland sighting was recorded at Lake Wheeler near Raleigh, N.C., where a single bird was seen on 29 March by James Mulholland.

RAZORBILL: A fresh specimen was found dead by John E. Cely at Pawley's Island, S.C., on 22 February, marking the only reported alcid record for the winter season.

WHIP-POOR-WILL: A late lingerer was recorded near West End in Moore County, N.C., on 7 December by Jay Carter.

WESTERN KINGBIRD: One was observed at North Island, Georgetown County, S.C., on 8 December by John E. Cely.

BEWICK'S WREN: One wintered at Townville, S.C., where it was last seen on 6 March by Harry LeGrand.

BLUE-GRAY GNATCATCHER: Mr. and Mrs. Claude Dunn observed a hardy individual at Zebulon, N.C., on 22 January, fide Eloise Potter.

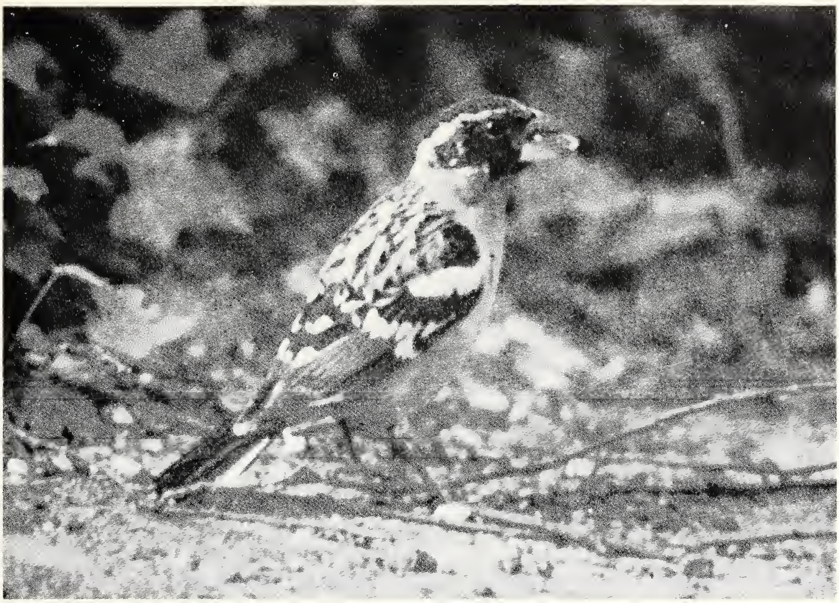
WHITE-EYED VIREO: One was an unusual winter-season find at Raleigh, N.C., observed on 2 February by James Mulholland.

PROTHONOTARY WARBLER: A very early singing male was heard at Fairlawn Plantation near Charleston, S.C., on 23 February by Ted Beckett.

WORM-EATING WARBLER: A very early spring transient was recorded in Forsyth County, N.C., by Charles Frost on 23 March.

BLACK-THROATED GREEN WARBLER: One was found in the company of Yellow-rumped Warblers at Wilmington, N.C., on 29 December by Kitty Kosh.

CAPE MAY WARBLER: An early and unexpected visitor was present for 3 days in F.M. Probst's yard at Pawley's Island, S.C., 25-27 March.



BLACK-HEADED GROSBEAK, Reidsville, N.C. (Photo by Edward Burroughs)

YELLOW-BREASTED CHAT: One was seen on 7 January at Garysburg in Northampton County, N.C., by Merrill Lynch. Another individual was a regular feeder visitor during February and March in Winston-Salem, N.C., observed by Dixie and Richard Proctor.

BREWER'S BLACKBIRD: Ted Beckett reported seeing numerous blackbirds of this species flocking at Magnolia Gardens near Charleston, S.C., on 11 January. Elsewhere, Merrill Lynch observed a single male at Tillery in Halifax County, N.C., on 9 January, and two males were seen on 31 March at Rock Hill, S.C., by Michael Boatwright. It appears that increasing numbers of this species may be extending their winter range into the Carolinas.

BLACK-HEADED GROSBEAK: A well-marked male was present at the feeder of Pete Yount in Reidsville, N.C., from 19 January through early May, photographed by Edward Burroughs (see above).

LE CONTE'S SPARROW: An adult was well seen at Santee N.W.R. on 18 January by Dennis Forsythe.

TREE SPARROW: One was seen in Forsyth County, N.C., on 16 December by Fran Baldwin and Ramona Snavely.

WHITE-CROWNED SPARROW: 98 individuals were counted along a half-mile hedgerow at the Caledonia Prison Farm near Tillery, Halifax County, N.C., on 9 January by Keith Fielder and Merrill Lynch.

LINCOLN'S SPARROW: An individual wintered at Charleston, S.C., where it was seen regularly at Perry Nugent's feeder from 9 December through the end of April. Another was seen 7 January near Townville, S.C., by Harry LeGrand.

LAPLAND LONGSPUR: A flock of 15 to 20 again wintered at the Johnston Farm in the Occoneechee Neck section of Northampton County, N.C., where some have been found to be regular winter visitors the last several years. In addition to the population at this site, Merrill Lynch reported seeing two longspurs feeding with Horned Larks at the Caledonia Prison Farm in neighboring Halifax County on 9 January. Elsewhere, a single bird was seen on the coast at Cape Point on Hatteras Island, N.C., on 5 March by Clay Gifford and Joe Hudick.

SNOW BUNTING: One was an unusual visitor at a feeder in Gastonia, N.C., 10-11 December, observed by Ruth Rice and reported by Alan Stout. Coastal sightings were rare with single birds recorded on 27 December by Joe Hudick and 18 February by Fred Pongrace at Cape Hatteras, N.C., and one at Bird Shoal near Morehead City, N.C., on 27 January by Tom Quay and John Fussell.

CBC Roundtable

... with Louis C. Fink

An Invitation

CBC members are cordially invited to attend the fall meeting of Georgia Ornithological Society to be held at Jekyll Island 17-19 October 1975. Guest speaker for the Saturday night banquet will be Chandler Robbins. Ted Holloway will give a program on shore birds Friday evening. Field trips will range from the Altamaha estuary southward to the Florida line, and two pelagic trips also are in the planning stage. Further information and reservation forms can be obtained from late August through September by writing Wallace D. Dreyfoos, President, Georgia Ornithological Society, 4627 Tall Pines Drive, N.W., Atlanta, Georgia 30327.

New Curator

David S. Lee is the new Curator of the Bird and Mammal Collections at the North Carolina State Museum of Natural History. He is a graduate of Florida Southern College, where he studied under Museum Director John Funderburg, and holds a Masters degree from Florida Atlantic University. Prior to coming to North Carolina, the Maryland native taught elective high school biology courses, served as Curator of the Bird and Mammal Collections of the Natural History Society of Maryland, and was on the staff of the Florida State Museum. The author of some 80 scientific and popular articles, Lee presently is working on a book on the fresh water fishes of Maryland and Delaware. Although he is interested in nearly every field of natural history, Dave and his wife Barbara particularly enjoy bird study. They recently visited the mountains of North Carolina to record the songs of our confusing chickadees. One of Dave's fine bird photographs appears on the cover of this issue.

Breeding Bird Survey

Since the 1966 nesting season volunteers have cooperated with the Bureau of Sport Fisheries and Wildlife to census breeding bird populations in the Carolinas. In a newsletter dated 25 April 1975, Danny Bystrak, of the Migratory Bird and Habitat Research Laboratory, offered some comments on population trends detected through computer analysis of the Breeding Bird Survey data. "Statistically significant changes at the continental level from 1973 to 1974," he wrote, "included increases in the Ruby-crowned Kinglet and Purple Martin, and decreases in the Great Crested Flycatcher, Tufted Titmouse, Brown Thrasher, Evening Grosbeak, Dickcissel, and Field Sparrow. Most of these changes were between 10 and 25 percent. In the Eastern Region (east of the Mississippi River), the House Wren registered an increase, and the Common Grackle and Slate-colored Junco a decrease. . . . The Purple Martin increase was noticed especially in the East, as populations began to recover from the effects of Hurricane Agnes of June 1972. . . . The most striking changes have been increases in the Cattle Egret in the East (average increase of 12 percent per year from 1966 to 1974), the House Finch in the East (22 percent per year), the Starling in the West (16 percent per year from 1968 to 1974), and a decrease in the Black Tern in the East and Central Regions (15 percent per year). The Yellow-shafted Flicker and Red-headed Woodpecker show a slow but steady annual decline of 3 percent per year in the East.

"The Audubon Breeding Bird Censuses conducted in New Jersey, Maryland, and other eastern States had shown a marked decline in populations of three common deciduous forest species, the Red-eyed Vireo, Ovenbird, and American Redstart, during the early 1960's. The BBS has shown an average annual increase in these species of between 8 and 11 percent from 1966 through 1974 on their nesting grounds in the Maritime Provinces. This increase is especially interesting in view of the fact that Dr. David Johnston (*Science* 186:841-842) found a highly significant decrease in DDT derivatives in body fat of ten species of migrating songbirds (including these same species) killed at a Florida television tower during the period 1964 through 1973.

"Among the rarer species, there has been an upward trend in Upland Sandpipers since 1969 and in the Mississippi Kite since 1967."

Dr. Johnston, incidentally, is a former Editor of *The Chat* and now serves on the faculty of the University of Florida at Gainesville.

Blue Goose Flyer

Conservation-minded CBC members may be interested in receiving the *Blue Goose Flyer*, a newsletter dedicated to the preservation and perpetuation of the National Wildlife Refuge System. For further information write National Wildlife Refuge Association, 6211 Logan Avenue South, Minneapolis, Minnesota 55423.

Carolina Bird Club
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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from State and Federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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All CBC members not in arrears for dues receive *The Chat*, a quarterly journal devoted to bird study and conservation, and the *CBC Newsletter*, which carries information about meetings, field trips, and club projects. Articles intended for publication in *Chat* may be sent to the Editor or to the appropriate department editor listed in a recent issue of the bulletin. Items for the *Newsletter* should be sent to its Editor, F.M. Probst, Route 2, Box 80-C2, Pawley's Island, S.C. 29585. Correspondence regarding memberships, changes of address, or requests for back numbers of either publication should be sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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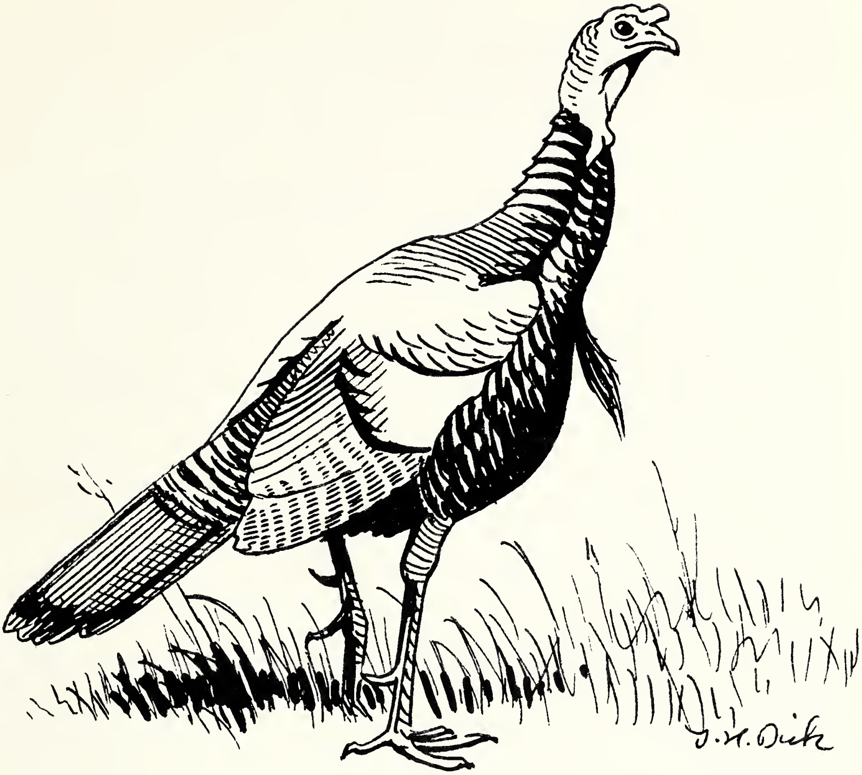

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The Chat

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OUR COVER—The wild Turkey gobbler strutting on our cover is the work of John Henry Dick, who also contributed the Whistling Swans in flight on page 90.

CHANGING STATUS OF THE FISH CROW INLAND

LOUIS C. FINK

Bird students are hereby asked to be alert to the status of the Fish Crow (*Corvus ossifragus*) in the Carolinas. The big black bird flapping past no longer can be dismissed as a Common Crow (*Corvus brachyrhynchos*); it may well be a Fish Crow, which certainly is extending its range. Telling the two apart is a nice exercise in identification. Finally, we need to know a lot more about the food habits of the Fish Crow.

Consider how easy it used to be to list Fish Crow on your field card. *Birds of North Carolina* (Pearson et al., 1942) says flatly that the range in North Carolina is confined to a strip of undetermined width *along the coast*. In *A Field Guide to the Birds* (Peterson, 1947), the Master said, "Listen for this small crow along tidewater ... it is seldom far from tidewater." It is the same story in Georgia (Burleigh, 1958), where the Fish Crow is termed a common resident on the coast and of local occurrence in the interior of the state near the larger streams and bodies of water. "The Fish Crow is so called because of its preference for the vicinity of water, where as a scavenger, it undoubtedly includes dead fish as a part of its diet."

Frank Chapman (Chapman, 1940) said, "The Fish Crow, while not confined to the coast or even the vicinity of water, is not found far inland." A later sage (Wetmore, 1964) finds the Fish Crow "from the inland edge of tidewater country to the sea along the Atlantic and Gulf coasts."

Reading books published in the last 30 or 40 years, you get the feeling that observers were sensing a change in the affinity of Fish Crows for salt water. Gilbert Grosvenor (1937) said, "You may find them inland, especially in the southern states." Gilbert Pearson (1936): "Far more common along the coast and about rivers and lakes than in the fields and wooded uplands. Not restricted to the immediate coast but extending back to the base of the Blue Ridge mountains, at least in summer."

Other voices were heard. Richard Pough (1949): "A bird of low coastal country, but it also frequents rivers, swamps and lakes for some distance inland." Verne Davison (1967): "A common year-long resident along stream and bay shores of the Gulf and Atlantic coasts and *large southern rivers*."

Back in 1937, Dr. Murphey (1937) said the Fish Crow was uncommon around Augusta, Georgia, and sharply limited to the river bottoms of the Savannah and its *larger tributaries*.

At the northern end of its range, the Fish Crow was found to be an uncommon summer resident in New York City, frequenting woodlands *near water* (Arbib et al., 1966).

For a long time, it seemed to be conceded that this was a salt-water bird which might move inland if large bodies of water were available. But Harold Peters (1957) said that the bird was a common, breeding permanent resident in Georgia, to be found in open woods or parks, cultivated fields of cropland, roadsides on fence posts and telephone wires.

The Fish Crow is not known in Atlanta where I lived for 20 years. So when I moved to Rocky Mount, N.C., in 1973, I assumed that all the crows I saw in town, over shopping centers and on the farms, were Common Crows—until I heard them call. At first, I supposed that a few of the birds were Fish Crows; the two species are said to feed together (Robbins et al., 1966). A year has gone by and I have yet to hear a Common Crow in Rocky Mount; they all appear to be Fish Crows. We do have the Tar River here, but it is hardly the large river which seemed a requisite; our large body of water is the new Tar River Reservoir, and I find no evidence at all that Fish Crows feed near the reservoir.

Let's look farther inland—to Raleigh. Hader (1969) says wisely "that the residence status of the Fish Crow needs clarification. It was first recorded 24 March 1962, and

TABLE 1. *Spring Bird Count totals for Fish Crow and Common Grackle at Raleigh, N.C., 1956 through 1974.*

Year	Common Grackle	Fish Crow
1956	0	0
1957	1	0
1958	No report	No report
1959	2	0
1960	15	0
1961	6	0
1962	10	0
1963	10	0
1964	38	1
1965	60	19
1966	67	5
1967	807	12
1968	275	5
1969	535	5
1970	308	24
1971	166	13
1972	618	9
1973	629	20
1974	669	16

has been listed on all Spring counts since 1964. No breeding records. Was present through fall of 1968 with 47 recorded on Christmas Count."

Spring Bird Count totals for the Fish Crow and Common Grackle at Raleigh, N.C., are given in Table 1. The figures demonstrate the fairly recent arrival of the Common Grackle as a breeding bird at Raleigh, followed within a few years by the Fish Crow. The Fish Crow has appeared at Raleigh each spring since 1964, and Edmund LeGrand found a nest in Raleigh in 1972.

The Fish Crow is here to stay in North Carolina. But does it stay near water? Harry LeGrand (pers. com.) writes, "I have never seen a Fish Crow feeding around any of Raleigh's lakes, and only occasionally do I see them in the vicinity of lakes. Instead, they are usually seen in pinewoods, and surprisingly, mainly in residential areas."

This is not an exhaustive study, but we have some other inland records. The 1973 Christmas Count (Arbib, 1973) recorded 35 Fish Crows at Roanoke Rapids, N.C., and two at Thomasville, Ga., which is 150 miles from the coast. At Clemson, S.C., a Fish Crow was found on 5 May 1973, possibly the first for that section of the state (Teulings, 1973). On 18 October 1972, there were 178 at Roanoke Rapids, and on 28 October 1972 there were 65 at Columbus, Ga. In 1974, Harry LeGrand found 5 on 23 June and 2 on 8 July, both at Clemson.

Denton (pers. com.) says the "Fish Crow does seem to have followed the larger river valleys into the interior. As to when it moved in, we don't know. It was present at Augusta by 1900 and at Macon in 1929. As to whether it is increasing I can't say; there are more recent and frequent records, but this may reflect more and better birders. The bird is not confined to the vicinity of water but spreads out into the pines to nest. It was seldom recorded north of Augusta until Clark Hill reservoir was built, but now is frequently seen around the lower end of it. The Fish Crow is normally absent from Augusta in December, January and February, but last winter many remained here and 94 were recorded for the first time on the [1973] Christmas Count."

Let me cite two other examples of the Fish Crow's changing range. Finch (1973) reports the first proven breeding record in Massachusetts at West Roxbury. The dump in that city previously had attracted fair numbers of the birds in winter.

St. Louis, Missouri, also records the Fish Crow. According to J. Earl Comfort (pers. com.), "There has been a Fish Crow around Creve Couer Lake for many years. The other local habitat is the levee area below Jefferson Barracks Bridge in St. Louis County. The levee crows are seen in any season, usually one or two. They associate with Common Crows so we can see the difference in size, but we don't rely on this for identification." The A.O.U. *Check-list* (1957) records the Fish Crow as far up the Mississippi River as Fort Smith, Arkansas, but nowhere near as far as St. Louis.

IDENTIFICATION

If we admit that the Fish Crow is moving inland and does not always show a preference for large bodies of water, we can be alert for it. Identification can be just as difficult as defining its distribution. Consider three standard field guides (Peterson, 1947; Pough, 1949; Robbins et al., 1966): they give the length of the Fish Crow as 16-20 inches, 17 inches, and 15 inches. The same three guides describe the Common Crow's length as 17-21 inches, 19 inches, and 17 inches, respectively. So the Fish Crow is smaller, but the difference is not apparent unless the birds are side-by-side; even then, there are differences in individuals. The Fish Crow is described in the books as being "slimmer," "thinner-billed," and "with more pointed wings." Pough adds that the Fish Crow sails almost as much as a raven and often hovers in one place as it looks for food on the surface of the water.

The best identification seems to be voice. The Common Crow gives an honest-to-goodness *caw* which all school boys know. The Fish Crow gives a short nasal *car* or *ca*; sometimes a two-syllabled *ca-ha* (Peterson, 1947). There is also a description given as *cuh-cuh* (Robbins, 1966). A third version (Pough, 1949) gives the Fish Crow's voice as "a short, hoarse *kock*, closer to a Black-crowned Night Heron's *quowk* than to a Common Crow's *caw*. A two-note *oh-oh* is frequent."

In summer, the voice is difficult because a young Common Crow sounds like a Fish Crow.

FOOD

The Fish Crow has a record of eating eggs of water birds: two dozen eggs of the Clapper Rail (Pearson, 1937); every egg of 20 pairs of Little Blue Herons at Big Lake, N.C. (Pearson, 1936); "Always found in evidence around nesting colonies of southern water birds, as it is very fond of eggs" (Pough, 1949); "Prey heavily on nests of herons, terns, rails and other water birds. Steal pigeon eggs in urban Washington, D.C." (Wetmore, 1964); "They plunder heron and cormorant rookeries" (Pearson et al., 1959); "The devastation wrought by these piratical birds among nests of other species is a serious menace in many places along the Atlantic coast" (Grosvenor, 1937).

Of course, the Fish Crow does not live on eggs alone. He scavenges for dead fish. "Inland he feeds with Common Crows" (Robbins et al., 1966). "They skim water and seize minnows. They dive-bomb gulls and terns, forcing these birds to drop their catches. They forage far inland along the larger rivers, eating a variety of fruits, berries and seeds" (Wetmore, 1964).

In his exhaustive work, Verne Davison (1967) says the Fish Crow consumes plant food 75% in fall and winter; 30-60% in summer.

Denton writes in a letter dated 11 June 1974 that the "Fish Crow is an omnivorous feeder like the Common Crow, feeding on grain, fruits, etc. as well as on animal matter. They do like eggs and I have seen them frequently raiding pigeon nests on top of Talmadge Hospital in Augusta, Georgia, as well as on the higher buildings downtown. Last week I watched one light in a tall pine tree where Blue Jays were nesting. It was mobbed by jays, Mockingbirds, grackles and robins so it didn't get the eggs but it might have if it had a chance."

In July of 1974, I watched two Mockingbirds attacking a Fish Crow in a tall pine in Rocky Mount. The big bird stood it for 10 minutes and finally flew off, with the Mockingbirds after him.

The West Roxbury report observed that the town dump had attracted Fish Crows in winter, but not until 1973 did the birds breed. My own observation is that Fish Crows are abundant near shopping centers, which usually have trash and garbage behind the stores. But like so many others, I have never seen a Fish Crow eating. LeGrand postulates that they may feed several miles from their nests.

Having seen Fish Crows raid Common Grackle nests in her yard near Zebulon, N.C., Eloise Potter (pers. com.) suggests that Fish Crows might substitute eggs of the colonial nesting Common Grackle for those of colonial water birds when it moves inland. Grackles apparently began breeding in Wake County, N.C., during the 1950s, and Fish Crows first appeared at Raleigh in 1962. Raleigh Spring Bird Count data for these two species (Table 1) indicate that the breeding range extension of the Common Grackle might have influenced the distribution of the Fish Crow.

Harry LeGrand (pers. com.) notes that both species nest in tall pines, often in residential areas. Grackles become abundant in Raleigh in late February, and Fish Crows arrive in early to mid-March, leaving in November.

NESTS

Nests are found in American holly; black, live, and pin oak; loblolly, pitch, and slash pine; and red cedar (Davison, 1967). "Nests may be high in deciduous trees in swamp woodlands, or lower in clumps of hollies, cedars or pines near the coast" (Pough, 1949). In Georgia (Burleigh, 1958), the nest frequently is built near the coast in a live oak 10 or 12 feet from the ground, but nests in Augusta and Thomson were in the tops of loblolly pines, fully 50 feet from the ground. Edmund LeGrand found a nest in a medium-height pine grove in residential Raleigh.

It is evident that more information is needed about the Fish Crow in North and South Carolina: complete details on nests and any possible information about food. Such reports should be sent to the editor of *The Chat*.

Because there is so much to learn about the Fish Crow, this report will close with one piece of information which seems to be definite: the bird's name. From the remarkable *Words for Birds* (Gruson, 1972), we learn that the Fish Crow's Latin name is *Corvus ossifragus*: *Corvus*, from the Latin for raven, according to Pliny, deriving from the Greek *krazo*, meaning "to croak"; *ossifragus*, or bone-breaker, from its habit of feeding. So, our friend is a bone-breaking croaker, or a croaking bone-breaker. Take your choice; just be sure it's a Fish Crow.

ACKNOWLEDGMENTS

The author is grateful to Harry LeGrand and J. Fred Denton, each of whom supplied data and made helpful comments after reading the manuscript.

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CORRECTIONS

The Red-cockaded Woodpecker seen at Bunn's Lake by Ricky Davis on 24 November 1974 (*Chat*, 39:27, March 1975) was in Franklin County rather than Wake. The lake is formed by a dam on Moccasin Creek, the course of which is the Wake-Franklin county line for a considerable distance. The line runs approximately down the middle of the lake with the eastern shore being in Franklin County and the western in Wake. The county markers were moved during road construction, thus causing Davis to become confused about the location of the site. Incidentally, the newly opened four-lane US 64 cuts across the northern end of Bunn's Lake.

Because of an error in the paste-up of camera-ready copy, the birds are not listed in A.O.U. *Check-list* order in the table for "Distribution and Abundance of the Wood Warblers in North Carolina During the Spring, Nesting, and Fall Seasons" (LeGrand, *Chat*, 39:45-54). The last 10 species (Yellow-throated Warbler through LouisianaWaterthrush) should have been placed between the Blackburnian and Kentucky Warblers. The Editor regrets this unfortunate error and apologizes to the author, who had no opportunity to read proof on this portion of his paper.—EFP

CBC Roundtable

... with Louis C. Fink

Bird Finding in the Carolinas

MOUNTAINS OF NORTH CAROLINA—People wishing to look for birds in the higher elevations of North Carolina in the summer may find that well-known locations such as Clingman's Dome, Mt. Mitchell, and Grandfather Mountain are flooded with tourists. Birding along the Blue Ridge Parkway can be frustrating as cars whiz by. Two paved roads offering the best combination of good birding and little noise are the road to Heintooga Overlook in the Great Smoky Mountains National Park and a new U.S. Forest Service road in western Macon County.

For information on the Heintooga road, at the southeastern corner of the park, see the article by H. Douglas Pratt (*Chat*, 35:10-11). This road generally ranges between 4,500 and 5,500 feet in elevation, and is the easiest and best place I have found for Black-capped Chickadees. Most of the birds of the northern hardwood and spruce-fir forest zones can be found here.

An apparently new Forest Service road runs from approximately 2 miles W of the Wayah Bald road junction on SR 1310 to the Kyle community, a distance of 15 miles. The road runs through deciduous and mixed deciduous-hemlock forests at an elevation of 4,000 to 5,000 feet. The road is different from most mountain roads, however, as there are wide open strips of grass and saplings between the road and the forest. This "opening up" of the forest is a boon to the birder, because it provides habitat for birds frequenting woodland margins and bushy areas. I birded along this road in late June and early July 1975, often parking on the road and saw fewer than 10 cars in 6 hours. Because of the absence of traffic, I saw a Woodchuck, a Gray Fox, and a Ruffed Grouse standing on the road on the afternoon of 27 June. A 4-hour trip on 1 July showed that Veeries, Dark-eyed Juncos, and Indigo Buntings were very common and could be heard at practically every stop. Probably the most interesting species along this road is the Yellow-bellied Sapsucker, which I found to be common along the southernmost end. Their "Morse Code tapping" could be heard at great distances on the mountainside (Nantahala Range). Other species that are fairly common or common are Carolina Chickadee (no Black-capped), White-breasted Nuthatch, Winter Wren, Wood Thrush, Solitary Vireo, Golden-winged, Black-throated Blue, Blackburnian, Chestnut-sided, and Canada Warblers, Northern Parula, Ovenbird, Scarlet Tanager, and Rose-breasted Grosbeak.

I have two words of caution about this road: first, gates are present at each end, meaning that the road may be closed in winter and at other times; and second, the terminus near Kyle is on an insignificant dirt road just off the main highway (SR 1310) and may be difficult to find. Nevertheless, this is a fine spot for birding, and I highly recommend this road for people who want to see plenty of birds with a minimum of disturbance.—HARRY E. LeGRAND JR., Department of Zoology, Clemson University, Clemson, S.C. 29631.

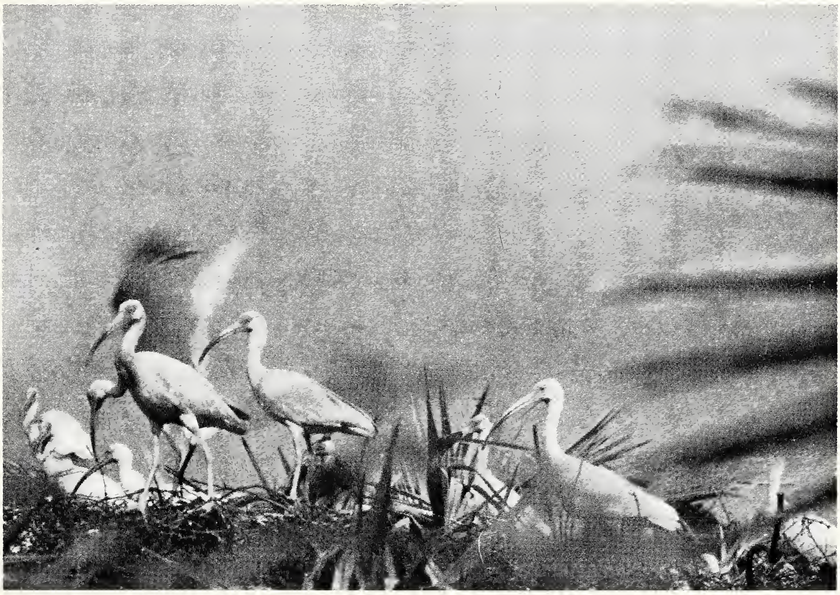
FOUR BRIDGES, Franklin County, N.C.—On NC 39 approximately 4 miles S of Louisburg and 5 miles N of Bunn lies a large swamp formed by the junction of Cedar and Big Branch Creeks in their course to the Tar River, which flows more or less parallel to the highway some 2 miles to the east. Although only two bridges (0.1 mile apart) now span Cedar Creek on Hwy 39, the location still is known locally as Four Bridges. Several wide places on the east shoulder of the road afford safe parking, and a mile-long stretch of the swamp can be studied quite easily from the roadside. Leading to the edge of the water are short paths kept open by fishermen. My most exciting finds at Four Bridges thus far have been an active Red-shouldered Hawk nest and a family party of Pileated Woodpeckers, but the large variety of birds I have seen here in just a few visits indicates that unusual species will be found sooner or later. Four Bridges is a convenient side trip for travelers on US 401. SR 1110 connects US 401 with NC 39 about 2 miles N of Cedar Creek, which saves driving all the way to the junction of the two major highways in Louisburg.

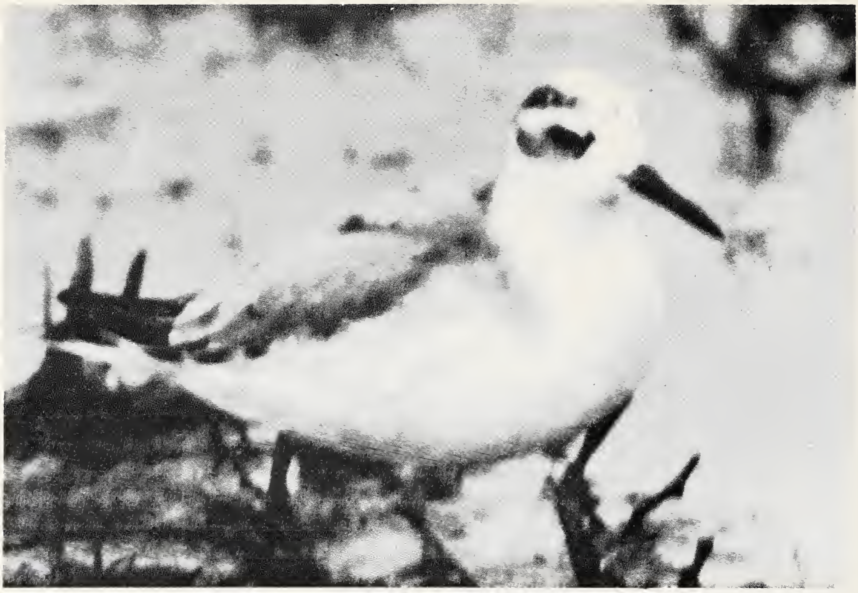
Incidentally, I am working on a list of the birds of Franklin County. I would like to correspond with anyone who has records for the area. My own field work is particularly weak in respect to waterfowl, shorebirds, and feeder visitors.—ELOISE F. POTTER, Route 3, Box 114 AA, Zebulon, N.C. 27597.

From the Photo File

From time to time the editors of *Chat* receive drawings and photographs that for one reason or another remain in our files an embarrassingly long time without finding an appropriate place in the bulletin. Many of these photographs are too wide in proportion to their height to fit the allotted space on our cover. In some cases the species of bird just happens to be one seldom mentioned in our papers and notes. A few of these file photos are reproduced below and on the next two pages. Others will appear in this department whenever space is available.

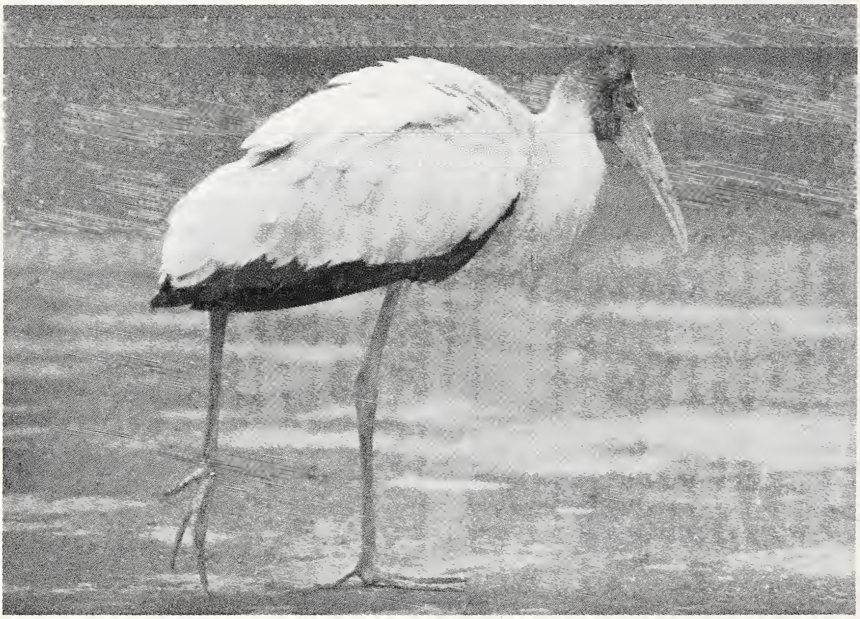
White Ibis Colony, Blackbeard Island, S.C.—E.O. Mellinger





Red Phalarope, Lake Benson, N.C., 27-31 October 1973
(Chat, 38:71)—Chris Marsh

Wood Stork, Rockingham County, N.C., 31 May 1974
(American Birds, 28:788)—Ed Burroughs



Gull in Flight—Tom Owen

SPRING BIRD COUNT—1975		COAST				COASTAL PLAIN						PIEDMONT												MOUNTAINS		
		Morehead City, N.C 26 April	Wilmington, N C 27 April	Charleston, S.C. 27 April	Hilton Head Is , S.C. 17 April	Beaufort Co., N C. 3 May	Pamlico Co., N C. 26 April	Dillon, S C. 1 May	Columbia, S C 26 April	Southern Pines, N C. 29 April	Roanoke Rapids, N C. 4 May	Henderson, N C. 26 April	Raleigh, N C 3 May	Durham, N C. 19 April	Chapel Hill, N C. 4 May	Greensboro, N C 3 May	Winston-Salem, N C 3 May	Iredell Co., N C. 4 May	Charlotte, N.C 3 May	Greenville, S C. 3 May	Clemson, S C. 6 May	Elkin-Ronda, N C. 26 April	Caldwell Co., N C 5 May	Yancey-McDowell Co., N.C. 10 May	Buncombe Co., N.C. 3 May	Brevard, N C 3 May
Common Loon	161	116	22	1	•	1	....	2	....	1	....	8	....	....	....	2	....	....	....	....	2	1	....	1	4	....
Red-throated Loon	8	2	1	2	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Red-necked Grebe	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Horned Grebe	26	1	6	8	2	....	....	....	7	....	1	....	1	....	....	....	....	....	....	....	•	....	....	....	....	....
Eared Grebe	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
Pied-billed Grebe	40	2	6	9	2	4	3	•	....	4	....	....	....	1	1	1	2	2	....	....	....	....	....	....	....	3
Brown Pelican	307	5	51	172	79	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gannet	5	1	....	....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dbl.-cr. Cormorant	2150	330	103	174	1500	26	1	....	....	5	11	....	•	....	....	....	....	....	....	....	....	....	....	....	....	....
Anhinga	24	....	3	18	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Blue Heron	246	8	62	61	66	1	3	1	....	1	19	....	4	....	3	3	6	3	1	....	2	2	....	....	....	....
Green Heron	265	18	39	53	37	3	17	3	1	4	11	....	19	6	15	2	11	2	4	6	9	1	....	2	1	1
Little Blue Heron	173	42	17	43	68	....	....	....	....	....	1	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....
Cattle Egret	264	115	10	46	41	1	40	....	....	....	....	....	3	5	....	....	....	3	....	....	....	....	....	....	....	....
Great Egret	465	188	75	123	70	....	2	2	....	1	3	....	1	....	....	....	....	....	....	....	....	....	....	1	....	....
Snowy Egret	340	64	93	135	48	....	•	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Louisiana Heron	222	37	27	111	47	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black-cr. Night H.	130	51	14	62	•	....	1	....	....	....	....	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....
Yellow-cr Night H	30	•	1	9	16	....	....	....	....	1	....	....	....	....	•	....	1	....	2	....	....	....	....	....	....	....
Least Bittern	27	3	5	11	....	....	1	....	....	....	....	....	6	....	....	....	1	....	....	....	....	....	....	....	....	....
American Bittern	9	1	....	2	....	....	....	....	....	....	1	....	3	....	....	1	....	....	....	....	•	1	....	....	....	....
Wood Stork	9	....	....	9	•	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Glossy Ibis	300	211	59	30	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	•	....	....	....	....	....
White Ibis	262	60	43	140	19	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Canada Goose	129	....	20	....	1	6	....	....	....	....	....	....	4	....	....	....	92	....	6	....	....	....	....	....	....	....
Fulvous Tree Duck	11	....	....	....	....	....	....	....	....	....	....	....	11	....	....	....	....	....	....	....	....	....	....	....	....	....
Mallard	155	9	....	....	....	23	....	•	....	2	7	....	11	....	9	14	55	....	3	....	10	1	....	....	9	2
Black Duck	25	13	5	....	....	....	2	....	....	....	....	....	3	....	....	....	....	....	....	....	2	....	....	....	....	....
Gadwall	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pintail	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....
Green-winged Teal	3	2	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Blue-winged Teal	123	22	2	35	....	....	....	....	2	....	40	....	3	2	....	2	1	5	6	....	2	1	....	....	•	....
American Wigeon	10	3	....	....	....	....	....	....	....	....	6	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Wood Duck	292	2	....	25	4	20	16	7	2	4	55	....	42	5	27	13	3	2	17	4	26	10	....	....	....	8
Redhead	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ring-necked Duck	8	....	1	1	1	....	....	....	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....
Greater Scaup	7	....	....	6	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	•	....	....	....	....	....
Lesser Scaup	39	....	....	....	15	....	20	....	....	....	....	....	•	....	....	1	1	....	•	....	....	....	....	1	1	....
Scaup (sp. ?)	2	1	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Bufflehead	5	....	....	....	2	....	....	....	....	....	....	....	3	....	....	....	•	....	....	....	....	....	....	....	....	•

Black Scoter	6			6																						
Scoter (sp. ?)	40	15	25																							
Ruddy Duck	10						8									1	•		•					1		
Hooded Merganser	2																					2				
Common Merganser	1															1										
Red-br Merganser	124	29	35	21	6	3				7	5					9			5		3			1		
Turkey Vulture	181	3	6	28	18	10	•		1	2	15	1	1	25	25		•	27			7	4		2	3	3
Black Vulture	91	•	2	14	12				4		51		1	3	3		•	1								
Swallow-tailed Kite	2			2																						
Sharp-shinned Hawk	11									1			1	4	1		•			1				2		1
Cooper's Hawk	11		1	2						1			1	3			1				1	1				•
Red-tailed Hawk	110	3	6	2	9	3	•		3	1	18		10	3	17	3	4	7	3		8	3			6	1
Red-shouldered H.	36	6	1	6	1	3	2			1	4		3	5	4		•									
Broad-winged Hawk	24									1				2	1	1	1	9			5	2		1	1	•
Marsh Hawk	17	1	2	3	2			1						1	3	1	•	3								•
Osprey	114	22	28	12	7		15			4	1		5	1	1	10	2	1	•		•	2			2	1
Am. Kestrel	35	1	1		17	2	1	1	2				•	1	1	1	2	1		1			1		2	•
Ruffed Grouse	5																							1	4	
Bobwhite	956	39	60	12	31	63	32	19	23	6	38	3	123	70	105	42	66	61	22	7	29	11	34	8	18	34
Turkey	4			2									2													
King Rail	13	2	1	3	6		1																			
Clapper Rail	173	35	26	82	30																					
Virginia Rail	11	4	2	2	•		1						2								•					
Sora	26	6	13	4			•						1					1			1					
Black Rail	3	3																			•					
Purple Gallinule	9		7	•			2																			
Common Gallinule	109	1	7	84	4		6				1				1		4				•				1	
American Coot	219	18	14	104		15	10			7	1		36		2	3	5		1		•	1		2		
Am. Oystercatcher	517	46	180	259	32																					
Semipalmated Plover	1695	370	70	1198	57								•													
Piping Plover	34	26	1	1	6																					
Wilson's Plover	38	9	14	15	•																					
Killdeer	167	12	10		4	3			3	12	6		8	17	13	10	27	9	15	5	10	1			1	1
Bl.-bellied Plover	756	80	193	304	179																					
Ruddy Turnstone	206	13	28	129	36																					
Am. Woodcock	37	10	1							1	1		6	1	6	6	1	1			3					
Common Snipe	61	12			3					6	18		3	5	2		7				4	1				
Whimbrel	1528	143	226	1155	4																					
Upland Sandpiper	2													2							•					
Long-billed Curlew	1	1																								
Spotted Sandpiper	146	4	2	7	6	3	2	2		4	12	2	18	2	15	7	13	5	4	2	11	1	3	3	7	11
Solitary Sandpiper	110	3			3			2		9	24		6	3	14	2	27	1		3	2	8				3
Willet	976	231	295	207	243																					
Greater Yellowlegs	148	31	28	46	3	3	1		1	1	19		1	2	•		7		2	1	2				•	
Lesser Yellowlegs	189	140	5	28			2				6		4		1		•				3					
Yellowlegs (sp. ?)	1														1											
Red Knot	26	26																								
Purple Sandpiper	4		4																							
Pectoral Sandpiper	19	6									3		1				9									
White-rumped Sandpiper	1	1																								
Least Sandpiper	889	767	14	51	15		•			6	10		9		1		9	3			4					
Dunlin	3189	1260	1206	239	484												•									
Short-bill. Dowitcher	1493	380	988	125	•																					
Long-bill. Dowitcher	52	52																								

SPRING BIRD COUNT—1975		COAST				COASTAL PLAIN						PIEDMONT												MOUNTAINS		
		Morehead City, N.C. 26 April	Wilmington, N.C. 27 April	Charleston, S.C. 27 April	Hilton Head Is., S.C. 17 April	Beaufort Co., N.C. 3 May	Pamlico Co., N.C. 26 April	Dillon, S.C. 1 May	Columbia, S.C. 26 April	Southern Pines, N.C. 29 April	Roanoke Rapids, N.C. 4 May	Henderson, N.C. 26 April	Raleigh, N.C. 3 May	Durham, N.C. 19 April	Chapel Hill, N.C. 4 May	Greensboro, N.C. 3 May	Winston-Salem, N.C. 3 May	Iredell Co., N.C. 4 May	Charlotte, N.C. 3 May	Greenville, S.C. 3 May	Clemson, S.C. 6 May	Elkin-Ronda, N.C. 26 April	Caldwell Co., N.C. 5 May	Yancey-McDowell Co., N.C. 10 May	Buncombe Co., N.C. 3 May	Brevard, N.C. 3 May
Dowitcher (sp. ?)	412	60	....	346	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Stilt Sandpiper	11	11	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Semip. Sandpiper	132	71	9	22	26	....	....	....	....	....	....	....	4	....	....	....	*	....	....	....	....	....	....	....	....	....
Western Sandpiper	436	38	4	305	89	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....
Marbled Godwit	52	....	40	5	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sanderling	622	256	200	6	160	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black-necked Stilt	2	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gr. Bl.-backed Gull	4	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Herring Gull	631	283	89	153	10	33	....	....	....	5	58	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Ring-billed Gull	1781	451	443	98	208	303	17	....	9	15	167	....	8	....	....	47	*	....	1	....	10	....	....	....	4	....
Laughing Gull	2617	1540	126	564	106	88	193	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Franklin's Gull	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Bonaparte's Gull	31	3	2	8	2	6	....	....	....	....	3	....	....	....	....	6	1	....	....	....	....	....	....	....	....	....
Gull (sp. ?)	*	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....
Gull-billed Tern	118	41	56	21	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Forster's Tern	151	16	29	50	56	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Common Tern	317	194	34	12	74	....	....	....	....	....	1	....	....	....	....	2	....	....	....	....	*	....	....	....	....	....
Roseate Tern	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Least Tern	2096	1425	499	153	12	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Royal Tern	701	237	111	182	147	17	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sandwich Tern	55	32	9	14	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Caspian Tern	31	2	19	1	8	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Black Skimmer	906	493	188	198	27	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Rock Dove	1053	96	105	....	....	....	1	18	66	3	30	16	108	204	12	52	188	18	24	2	10	36	35	2	23	4
Mourning Dove	3230	69	108	23	284	77	27	66	87	100	165	45	417	222	295	152	361	107	67	15	115	61	104	12	127	124
Ringed Turtle Dove	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	7	....	....	....	....	....	....	....	....	....
Ground Dove	20	....	5	12	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Yel.-billed Cuckoo	37	1	1	2	....	2	1	1	1	2	2	....	5	....	3	3	7	3	1	....	*	....	1	....	....	1
Bl.-billed Cuckoo	7	....	1	....	....	....	....	....	....	....	....	....	1	....	1	....	3	....	....	....	*	....	....	....	....	1
Barn Owl	10	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	1	1	....	....	*	1	5	....	....	....
Screech Owl	41	1	1	1	....	....	2	....	....	2	4	....	6	....	1	1	9	....	1	....	4	1	2	....	3	2
Great Horned Owl	15	....	2	1	2	....	....	....	....	....	3	....	2	1	....	....	2	....	....	....	....	....	....	....	1	1
Barred Owl	68	8	1	6	*	....	....	1	1	5	16	....	8	4	13	....	2	1	1	....	....	1	....	....	....	*
Chuck-will's-widow	172	60	35	4	15	1	4	*	....	9	6	....	12	*	....	1	2	*	1	....	22	....	....	....	....	....
Whip-poor-will	168	1	4	....	....	1	1	....	....	17	9	....	25	4	17	2	8	12	4	....	36	....	2	....	22	3
Common Nighthawk	72	11	8	....	1	1	3	....	....	10	2	....	2	....	5	7	6	7	1	....	2	....	5	....	....	1
Chimney Swift	1304	72	7	65	1	15	47	17	27	65	92	10	52	24	78	91	134	60	21	20	55	22	8	13	12	296
Ruby-th. Hummingbird	266	4	3	20	2	3	1	....	2	8	11	....	6	28	33	15	48	9	....	....	4	6	5	8	26	24
Belted Kingfisher	132	5	9	4	12	3	3	*	....	3	8	....	18	7	13	12	11	4	1	1	3	2	3	3	4	3
Common Flicker	747	34	80	9	3	34	18	6	15	7	23	11	69	33	42	64	107	34	9	2	34	7	25	10	30	41

Pileated Woodpecker	192	9	17	21	14	7	11	6	7	3	27	....	3	2	10	3	1	4	•	2	5	3	3	3	15	16
Red-bellied Woodp.	738	7	31	64	42	19	10	11	6	17	61	7	115	43	80	58	54	14	11	8	43	8	11	....	14	4
Red-headed Woodp.	133	7	25	4	2	34	3	1	9	8	2	4	7	1	6	9	2	2	1	1	2	....	....	....	2	1
Yel.-bel. Sapsucker	14	....	....	....	1	....	....	•	....	....	....	....	•	....	1	1	2	7	•	....	....	....	2	....	....	•
Hairy Woodpecker	90	1	3	6	2	•	2	....	4	2	4	1	15	2	15	6	10	2	•	1	3	1	1	....	....	9
Downy Woodpecker	377	5	12	16	7	8	4	2	7	8	19	4	45	29	48	27	34	7	4	1	16	2	15	3	30	24
Red-cock Woodp.	15	1	3	3	....	5	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eastern Kingbird	529	15	21	15	31	50	22	31	15	31	57	4	65	16	46	16	14	18	10	9	29	1	....	2	6	5
Gray Kingbird	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Cr. Flycatcher	727	85	52	151	21	61	34	6	10	14	49	5	44	1	20	23	31	42	6	5	29	1	4	....	24	9
Eastern Phoebe	232	....	1	....	2	3	....	....	1	6	9	5	24	8	49	13	15	23	4	4	15	1	5	13	9	22
Yel.-bel. Flycatcher	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	•	....	....	....	....	....	....	....	....	....
Acadian Flycatcher	317	8	7	22	....	6	3	1	1	5	63	....	82	....	56	10	12	17	•	....	21	....	....	1	1	1
Least Flycatcher	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	•	1	....	....	....	....	....	....	....	2
Eastern Wood Pewee	301	2	3	87	1	21	6	....	8	5	8	5	25	....	33	9	14	21	2	3	16	1	6	13	7	5
Olive-sided Flyc	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1
Horned Lark	51	....	....	....	....	....	....	....	....	1	4	....	....	....	....	3	5	35	....	....	3	....	....	....	....	....
Tree Swallow	1831	....	276	143	355	544	124	....	....	23	158	....	35	2	26	30	51	8	48		5	1	....	2	....	....
Bank Swallow	54	....	1	....	....	....	....	....	....	1	4	....	....	1	....	....	33	....	....	....	3	....	....	....	....	11
Rough-wg Swallow	392	13	25	28	2	15	13	7	10	12	16	2	14	10	16	15	79	14	5	9	19	9	4	12	19	24
Barn Swallow	1746	136	141	177	3	156	86	2	9	54	111	2	101	6	74	122	146	60	16	15	101	16	23	58	58	73
Cliff Swallow	4	....	....	....	....	....	....	....	....	....	4	....	....	....	....	....	....	....	....	....	•	....	....	....	....	....
Purple Martin	1363	137	53	30	5	376	137	35	....	25	9	1	78	31	11	138	106	37	12	18	25	67	32	....	....	....
Blue Jay	2119	38	114	21	63	68	31	37	77	48	48	66	191	112	189	179	182	99	43	43	114	51	60	29	101	115
Common Raven	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	5	1
Common Crow	1238	16	55	48	91	57	9	2	48	3	61	16	84	40	94	77	79	60	22	13	34	25	27	49	117	111
Fish Crow	419	110	88	58	68	27	13	....	....	3	37	....	15	....	....	....	....	....	....	....	....	....	....	....	....	....
Carolina Chickadee	1171	36	26	107	52	23	14	4	25	20	47	5	134	60	139	85	97	28	15	12	34	11	33	6	83	75
Tufted Titmouse	1267	27	61	110	38	33	26	6	16	18	66	8	114	77	113	71	109	45	20	6	35	11	38	26	91	102
White-br Nuthatch	180	....	....	....	....	4	....	•	....	2	3		5	6	25	16	48	2	....	2	1	3	7	3	32	21
Red-br. Nuthatch	13	....	....	....	....	....	....	....	....	1	....	1	2	•	....	....	1	1	....	....	....	....		3	....	4
Brown-hd. Nuthatch	308	26	47	58	3	11	2	3	5	9	5	1	14	15	18	13	32	8	10	2	26	....	....	....	....	....
Brown Creeper	5	....	....	....	....	....	....	....	3	....	....	....	....	....	....	....	1	....	....	....	....	....	1	....	....	....
House Wren	177	3	2	....	1	....	....	....	....	2	13	2	18	11	8	19	39	14	7		1	7	21	....	4	5
Winter Wren	9	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....	....	7	....	....
Bewick's Wren	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....
Carolina Wren	1582	49	67	148	62	76	27	14	47	17	93	12	182	129	169	80	104	39	14	15	64	25	8	9	51	81
Long-bill. Marsh W	97	61	9	9	5	....	5	....	....	3	2	....	1	....	•	....	2	....	....	....	•	....	....	....	....	....
Short-bill. Marsh W	29	1	16	6	2	....	1	....	....	....	....	....	....	1	1	....	....	....	....	....	•	1	....	....	....	....
Mockingbird	1592	83	152	41	164	62	30	51	49	31	51	51	123	78	97	164	94	67	52	17	61	5	26	4	30	9
Gray Catbird	883	13	20	9	7	21	16	6	7	26	75	17	140	14	46	63	167	29	19	7	47	11	19	10	49	45
Brown Thrasher	752	19	60	17	24	37	9	15	16	13	24	44	66	34	52	53	80	37	10	16	38	6	11	8	32	31
American Robin	2759	3	130	....	10	63	10	51	7	47	43	108	223	268	82	379	580	115	78	81	93	36	82	23	101	146
Wood Thrush	1090	2	19	10	2	45	17	14	5	17	99	10	228	27	139	109	141	46	22	13	33	6	9	7	28	42
Hermit Thrush	30	5	1	....	....	....	....	....	....	1	....	....	1	14	....	2	3	....	....	....	•	....	....	....	1	2
Swainson's Thrush	177	....	....	....	....	•	....	....	....	3	6	....	12	....	14	21	61	18	5	4	26	....	1	....	5	1
Gray-cheeked Thrush	17	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	2	10	....	....	1	....	....	....	2	....
Veery	73	....	....	....	....	....	....	....	....	2	4	1	29	....	11	4	11	2	2	2	2	....	1	....	1	1
Eastern Bluebird	538	5	7	12	29	35	2	1	5	27	11	1	25	19	88	20	48	48	9	8	33	6	27	15	25	32
Bl.-gr. Gnatcatcher	1043	25	44	205	16	8	13	4	3	12	127	1	118	118	99	15	140	40	3	3	26	7	1	2	4	9
Golden-cr. Kinglet	14	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	1	....	....	....	....	....	8	2	•
Ruby-cr. Kinglet	232	1	3	4	17	....	....	....	5	9	2	6	18	88	20	10	16	2	•	2	1	2	1	4	7	14
Water Pipit	33	....	....	....	....	....	....	....	....	3	14	....	1	1	6	....	8	....	....	....	•	....	....	....	....	....
Cedar Waxwing	1352	118	145	19	46	....	25	•	....	2	87		148	152	107	103	307	18	13	1	7	10	5	....	39	•

SPRING BIRD COUNT—1975		COAST				COASTAL PLAIN						PIEDMONT												MOUNTAINS		
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Loggerhead Shrike	66	2	2	11	1	....	....	2	5	7	....	1	2	4	4	3	3	6	8	1	1	....	1	....	2	....
Starling	4736	258	354	13	11	52	97	75	179	61	366	60	511	178	165	869	396	212	229	79	130	19	73	50	170	129
White-eyed Vireo	614	18	19	144	55	19	69	2	3	11	53	2	61	35	43	9	18	1	*	1	19	....	1	10	10	11
Yellow-th. Vireo	131	2	4	5	1	8	4	2	....	12	17	....	24	10	22	6	*	3	2	1	5	1	....	....	....	2
Solitary Vireo	41	....	....	....	4	....	....	....	....	1	....	....	4	4	2	3	6	7	....	....	3	....	....	3	1	3
Red-eyed Vireo	1191	18	31	71	21	18	10	3	13	26	174	12	311	23	160	80	39	37	10	7	59	1	3	11	20	33
Philadelphia Vireo	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	*	....	....	....	....	....
Warbling Vireo	5	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	1	3	....	....	....	....	....	....	....	*
Black-and-white W.	295	7	4	1	4	2	....	....	4	11	50	1	61	6	60	15	20	6	3	2	2	....	2	2	12	20
Prothonotary Warbler	231	32	8	42	2	3	1	8	1	12	67	....	28	1	11	2	3	1	2	1	5	1	....	....	....	....
Swainson's Warbler	28	5	2	6	....	1	3	....	....	3	1	....	2	....	....	....	5	....	....	....	....	....	....	....	....	....
Worm-eating Warbler	36	3	....	1	*	....	....	....	....	1	4	....	6	....	*	1	4	2	....	....	5	....	....	6	3	*
Golden-winged W.	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	*	....	....	2	3	....
Blue-winged W.	59	....	1	....	....	....	....	....	....	1	6	....	9	1	21	8	8	4	....	....	*	....	....	....	....	*
Tennessee Warbler	7	....	....	....	....	....	....	....	....	....	1	....	*	....	*	....	1	....	....	....	2	....	....	....	1	2
Orange-crowned W.	*	....	....	....	....	....	....	....	....	....	....	....	*	....	*	....	....	....	....	....	....	....	....	....	....	....
Nashville Warbler	4	....	....	2	....	....	....	....	....	....	....	....	....	....	1	....	1	....	....	....	*	....	....	....	....	....
Northern Parula	882	28	137	252	48	30	11	3	35	10	51	1	152	18	46	26	9	6	2	1	*	....	....	....	1	15
Yellow Warbler	213	....	5	....	2	3	5	3	....	5	19	1	24	....	17	6	33	7	*	3	20	2	4	18	20	16
Magnolia Warbler	12	....	....	....	*	....	....	....	....	....	....	....	1	....	1	5	2	1	....	....	1	....	....	....	1	*
Cape May Warbler	270	....	....	....	*	....	....	....	....	1	2	....	9	....	1	16	38	42	1	6	89	10	7	1	7	40
Black-th. Blue W.	229	1	3	....	1	1	....	....	3	13	8	1	63	....	31	22	22	4	6	6	2	....	....	30	6	6
Yellow-rumped W.	2895	85	308	30	268	45	54	37	25	45	221	18	490	129	249	164	442	69	35	22	90	17	2	....	29	21
Black-th. Green W.	53	6	1	29	....	....	....	....	....	....	1	....	1	....	1	6	4	1	....	....	1	....	....	....	1	1
Cerulean Warbler	29	....	....	....	....	....	....	....	....	....	25	....	1	....	1	....	*	....	....	....	....	....	....	1	....	1
Blackburnian W.	5	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	2	2	....	....	*	....	....	....	....	*
Yellow-throated W.	357	17	58	121	24	7	9	1	7	4	11	....	26	17	30	4	5	4	....	....	6	....	3	1	....	2
Chestnut-sided W.	40	....	....	3	....	....	....	....	....	....	....	....	3	....	....	3	10	1	....	....	1	....	....	6	11	2
Bay-breasted W.	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	2	....	....	....	1	1
Blackpoll Warbler	114	....	....	2	....	2	....	....	....	....	4	....	11	....	3	8	8	8	*	2	44	....	....	....	12	10
Pine Warbler	601	18	56	121	35	16	27	3	16	8	14	1	84	36	58	18	51	6	1	....	20	1	....	2	9	....
Prairie Warbler	353	49	62	60	7	8	42	....	7	7	5	3	26	11	39	7	1	5	....	....	9	....	....	1	4	*
Palm Warbler	47	2	2	1	3	....	....	*	....	2	1	2	4	1	5	....	1	1	....	1	9	....	....	1	10	1
Ovenbird	303	3	....	....	1	15	5	....	....	16	4	1	125	10	34	33	14	1	....	1	1	....	....	9	15	15
N. Waterthrush	84	....	....	....	1	....	....	....	....	4	19	....	29	2	16	3	6	....	....	1	1	....	....	2	....	*
La. Waterthrush	83	....	....	....	....	....	1	....	....	2	7	....	23	3	19	5	3	1	1	....	5	....	....	1	5	7
Kentucky Warbler	144	1	4	8	....	....	....	....	....	2	46	....	48	1	9	5	1	1	....	....	10	....	....	....	7	1
Connecticut W.	4	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	2	....
Com. Yellowthroat	1101	48	21	71	14	26	52	2	10	20	144	1	282	41	122	50	55	15	19	5	63	6	5	4	4	21
Yellow-br. Chat	295	2	8	7	1	6	8	1	14	1	24	....	51	....	33	20	26	10	11	3	34	1	3	8	5	18
Hooded Warbler	292	12	17	46	2	11	15	1	2	11	8	4	77	5	36	8	4	3	*	....	11	....	....	3	9	7
Wilson's Warbler	3	....	...	1	*	....	....	....	....	*	....	....	*	....	*	....	*	....	....	....	....	....	....	....	2	....
Canada Warbler	10	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	1	1	*	....	*	....	....	6	1	*

Am. Redstart	407	5	1	....	....	....	....	....	....	18	105	....	92	9	87	31	36	3	....	5	6	....	....	2	3	4
House Sparrow	2627	106	206	7	33	177	47	120	141	60	93	80	251	132	95	266	327	120	49	46	76	16	69	3	53	54
Bobolink	1312	....	....	1	....	....	....	....	17	8	369	....	284	1	244	192	14	28	11	1	78	....	....	....	64	*
E. Meadowlark	1807	88	20	5	32	51	66	11	75	17	153	6	195	127	163	90	131	165	89	58	118	11	31	6	38	50
Red-wg. Blackbird	3983	309	639	231	298	171	84	104	73	48	296	16	365	216	171	132	208	121	66	42	183	33	34	23	29	91
Orchard Oriole	363	25	56	20	9	35	54	9	6	6	37	....	32	5	12	5	10	7	3	1	26	1	4	....	....	....
Northern Oriole	96	12	2	1	*	....	....	2	....	3	....	2	7	*	6	13	17	5	....	3	10	....	4	....	6	3
Rusty Blackbird	121	....	3	50	....	....	....	....	....	....	1	....	1	....	22	....	19	5	*	....	....	....	....	....	8	12
Brewer's Blackbird	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....
Boat-tailed Grackle	807	209	212	246	140	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Common Grackle	5959	421	197	88	130	404	123	151	153	94	240	125	498	158	251	729	487	409	213	77	307	143	108	113	89	251
Brown-hd. Cowbird	1071	94	40	33	14	191	60	....	3	25	92	6	91	19	35	21	108	55	3	4	36	24	28	3	60	26
Scarlet Tanager	208	....	....	....	....	....	....	2	1	2	17	1	19	*	26	14	22	17	4	9	20	3	1	2	16	32
Summer Tanager	433	11	35	133	13	35	4	7	8	8	33	5	63	2	30	8	8	9	1	2	16	2	....	....	....	*
Cardinal	3708	142	163	135	219	79	29	41	220	74	203	56	460	213	271	210	297	152	84	38	102	63	99	47	132	179
Rose-br. Grosbeak	111	....	1	....	....	....	....	....	....	2	....	....	19	....	5	20	17	6	2	3	11	....	....	....	20	5
Blue Grosbeak	288	....	6	5	2	23	7	6	11	8	26	....	32	....	46	20	9	40	5	12	25	....	....	....	1	4
Indigo Bunting	1028	10	34	4	4	43	7	3	85	6	95	4	119	4	126	67	128	105	12	10	33	3	26	31	29	40
Painted Bunting	126	13	14	86	12	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dickcissel	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
Evening Grosbeak	128	....	....	....	....	....	....	....	....	16	....	40	36	4	3	1	*	....	....	....	....	3	....	....	15	10
Purple Finch	79	....	....	....	....	....	....	....	....	....	2	....	....	17	1	5	1	....	*	....	....	9	4	....	10	30
House Finch	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	3	....	....	....	....	....	....	....
Pine Siskin	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	3	....	2	....
Am. Goldfinch	2223	3	15	....	8	5	....	10	31	18	195	25	114	174	228	199	515	252	8	15	75	21	44	39	83	146
Ruf.-sided Towhee	1694	65	45	56	45	44	24	17	46	39	74	21	217	126	94	127	154	45	53	19	80	17	35	26	87	138
Savannah Sparrow	423	85	61	7	26	2	3	5	27	7	30	....	63	40	23	21	14	....	3	....	5	....	....	1	....	....
Grasshopper Sp.	69	....	....	....	....	....	....	....	....	....	4	....	16	1	3	6	10	5	1	2	21	....	....	....	....	....
Sharp-tailed Sp.	41	17	10	6	3	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Seaside Sparrow	115	83	13	18	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Vesper Sparrow	6	....	....	1	....	....	....	....	....	....	....	....	....	3	1	....	*	1	....	....	....	....	....	....	....	....
Bachman's Sparrow	11	....	4	2	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....
Dark-eyed Junco	117	....	....	1	....	....	....	*	....	....	....	2	3	23	....	....	3	....	*	....	....	....	....	34	45	6
Chipping Sparrow	1007	5	17	3	13	24	12	18	122	10	43	45	74	192	85	92	105	26	34	8	18	7	10	4	22	18
Field Sparrow	669	3	6	5	7	6	6	2	60	5	55	4	70	55	89	39	56	34	18	22	47	4	12	6	31	27
White-cr. Sparrow	74	....	....	....	....	....	....	....	1	....	11	....	11	....	14	20	7	2	1	....	3	3	....	....	....	1
White-th. Sparrow	3027	150	109	53	73	21	16	26	191	61	217	119	419	350	264	249	259	62	42	20	29	42	77	6	55	117
Fox Sparrow	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	*
Lincoln's Sparrow	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Swamp Sparrow	219	41	17	14	4	....	7	2	....	4	34	....	38	11	13	3	28	....	....	....	3	....	....	....	....	....
Song Sparrow	718	1	12	....	8	4	2	....	3	1	11	2	16	11	3	56	170	58	8	5	16	9	25	24	139	134
Total no. species	262	176	174	166	151	100	103	71	84	134	141	69	156	112	134	132	151	128	91	84	128	86	73	85	114	108
Total no. individuals	118,664	14,253†	11,178	11,634	7297	4249	2188	1138	2264	1722	6302	1154	9806	4542	6447	6603	8623	3650	1729	938	3453	998	1435	942	2732	3387
Field observers	416	14	20	37	18	12	5	2	12	4	10	?	30	20	40	31	52	11	19	7	8	8	6	5	17	28
Yard observers	106	9	0	0	2	3	0	2	0	9	0	?	9	2	4	2	3	3	3	1	0	5	15	0	8	26
Field parties	156	6	7	7	5	6	2	2	4	2	6	?	17	11	14	10	17	4	4	4	5	4	2	2	7	8
Field-hours	1319.5	71	78.5	72	79	53	26	16	34	27	46	?	120	86	87	85	147	33	22	11	47	42	36	16	45	40
Field-miles by foot	633.5	21	39	50	35	17	6	4	26	7	24	?	83	48	70	30	53	24	5	4	24	18	10	5	18	12.5
Field-miles by car, boat	3163	124	361	206	137	183	128	51	116	175	25	?	78	125	74	297	67	119	125	40	265	55	45	106	177	84

*Seen in count area during count period but not on count day.
†Includes 20 unidentified rails (King or Clapper).

SPRING BIRD COUNT—1975

HARRY E. LeGRAND JR.

Participants on the 1975 Spring Bird Count in the Carolinas recorded 262 species, only four species shy of the 266 species found in 1972. Twenty-five counts were taken this spring, an improvement of one over 1974, and the addition of Hilton Head Island, S.C., after a several-year layoff in spring, was most beneficial to the Spring Bird Count. Again the Outer Banks of North Carolina had no count; a census in this rich waterbird region might have sent the 1975 species total past the 1972 record.

Morehead City's all-time best (176 species), achieved with only six field parties, led all counts in total species. Wilmington also did quite well, as their 174 species attest, and Charleston followed with 166 species. Raleigh (156 species) and Winston-Salem (151) dominated the inland counts, but several other counts in central North Carolina had record-breaking species totals. Over 118,000 individual birds were tallied on the 1975 Count; Morehead City led with 14,000+ individuals.

A list compiled by Eloise Potter shows that through 1974, 304 species have been seen on count days on the Spring Counts, plus two hybrids and four species seen only during count periods. This spring's counts brought the species total to 307, as *Long-billed Curlew* (Morehead City), *Roseate Tern* (Hilton Head), and *House Finch* (Charlotte) were newcomers to the list. The two most exciting birds were seen at Clemson—a count period *Franklin's Gull* (first record for South Carolina) and a count day *Eared Grebe* (third state record, but surprisingly not new to the Spring Count list). Other outstanding finds were an unprecedented 11 *Fulvous Tree Ducks* at Raleigh, a rare and late *Red-necked Grebe* at Charleston, five *Glossy Ibis* at Clemson during count period, a *Gray Kingbird* at Morehead City, a *Yellow-bellied Flycatcher* at Wilmington, and three *Black Rails* at Morehead City and two during count period at Clemson. Noteworthy count totals were 1,155 *Whimbrels* at Charleston and 1,425 *Least Terns* at Morehead City. Also noteworthy were the 28 *Swainson's Warblers* reported on nine counts and the 59 *Blue-winged Warblers* on the counts, with an astonishing *21* at Chapel Hill! Raleigh had a number of impressive species totals, and the counts of several of the breeding warblers there were mind-boggling. Two low counts of note were the alarming 66 *Loggerhead Shrikes* (only Charleston reported them in double figures) and the five *Pine Siskins*, as compared to the 1,067 reported on all counts in the spring of 1974. Readers should see the Compilers' Comments for further details on unusual species.

The weather during the count period generally was favorable for conducting a good count. Unfortunately, a heavy day-long rain drenched the western half of the Carolinas on 3 May, and those counts from Charlotte westward on that date were severely hampered. In fact, Clemson postponed its count by three days when rain began at 07:30. Because most of the counts from Charlotte westward were already short of active and experienced observers, species totals from these counts fell far below those of the high-powered counts in central North Carolina. Readers should not be deceived into thinking that practically all species of songbirds are more common in the eastern piedmont than in the western piedmont and mountains, for certainly this is not the case in most species. Hopefully, with good weather next spring and more thorough coverage, these counts (and all counts with less than 100 species) will be less embarrassed by the coastal counts and those in central North Carolina.

The most difficult part of the count summary to write is that concerned with the compiling of the counts and the reporting of unusual species without details. As usual, compilation of the counts ranged from excellent to poor. As a general rule, the more thorough the coverage and the greater the number of species on a given count, the better the documentation of rare and unusual species for the count. Special commendations to compilers on the 1975 Spring Count go to John Fussell III (two pages of details for unusual species on the Morehead City count), Mark Huff and John Horn (three pages of details for the Durham count), Merrill Lynch (three pages of details for the Roanoke Rapids count), and especially to Ramona Snavely and Fran Baldwin (six pages of details for the Winston-Salem count, in addition to a page giving the addresses of observers of unusual species). It might be of interest to readers, count participants, and compilers that the details for the above cited counts were *handwritten.* It is obvious that people are better able to document a rare sighting thoroughly and convincingly by writing out the pertinent information rather than by typing the details.

Because no details were submitted for several unusual species reported on various counts, I deleted the following from counts where they are rare if not casual: a *Common Merganser*, six *Long-billed Dowitchers*, an almost certainly incorrect 39 *Ringed Turtle Doves*, a *Warbling Vireo*, and a *Fox Sparrow*. I also reversed the Bank and Rough-winged Swallow totals for one count, as a number of Banks and no Rough-wings were reported, the reversal of what one would expect at almost all localities in the Carolinas. A number of other species were accepted with marginally convincing details. Observers and compilers are reminded *not* to submit details for rare sightings in the form that they are published in Compilers' Comments—these comments are *my* summaries of the hopefully full and convincing details reported by the compilers. The compilers should double check the lists they submit to make sure that every rare species has accompanying details that will leave no doubt in my mind that the species was correctly identified.

COMPILERS' COMMENTS

COAST

MOREHEAD CITY, N.C. (Center: 0.7 miles NW of Crab Point in Newport River).

26 April. The three *Black Rails* (Compiler) were giving the *kik-kik-kurr* call at two locations north of the North River bridge at approximately 04:30. The *Long-billed Curlew* at Bird Shoal was almost certainly the same bird seen there on the Christmas count, as it was seen on two occasions in mid-April and was found on count day by T.L. Quay, Wayne Irvin, Don McCrimmon, Mal Whitsett, and John Wright. *Gray Kingbird* (John Fussell II) was seen just north of Morehead City on a telephone wire only 3 feet from an Eastern Kingbird; all field marks of the former were described, especially the very noticeably longer and heavier bill of the Gray Kingbird. *Redhead* (Allyn Powell, David Whitehurst) was a male at North River. The early *White-rumped Sandpiper*, remarkably high count of 52 *Long-billed Dowitchers* (identified by voice), nine *Stilt Sandpipers*, and the two *Black-necked Stilts* were seen by the Compiler et al. at the North River Marsh. Two more *Stilt Sandpipers* (R.J. Hader) were at Bird Shoal. Most of the *Least Terns* were seen feeding over Beaufort Inlet at sunset (Quay). Hader heard the *Whip-poor-will* at Fort Macon. *Black-throated Blue Warbler* (Ray Winstead) is a rare spring migrant in this area. Noteworthy high counts were the 60 *White Ibis* (continues to increase), 12 *Killdeers*, 10 *American Woodcocks*, and 767 *Least Sandpipers*. The 28 species of shorebirds are probably the most ever for a bird count in the Carolinas.—JOHN FUSSELL III, Box 520, Morehead City, N.C. 28557.

WILMINGTON, N.C. (center: Monkey Junction).

26 April. *Yellow-bellied Flycatcher* (Greg Massey) was in a deciduous swamp; voice and color were compared with Acadian Flycatchers. The yellowish wash on the sides and especially the *chu-wee* call were distinctive. Jay Carter saw the *Black-billed Cuckoo* and *Blue-winged Warbler* at Orton Plantation; both birds were described in detail.—FRANCES NEEDHAM, Box 8207, Wrightsville Beach, N.C. 28480.

CHARLESTON, S.C. (center: 14 miles NE of Mt. Pleasant and 0.5 mile E of US 17).

27 April. The *Red-necked Grebe* was well studied for about 10 minutes near the boat landing at Bull's Island; observers were Frederick Probst, Sertorius Barber, E.B. Chamberlain, Calvin Clyde, T.F. Hassell, and Jay Shuler. Perry Nugent and Joe Hall heard the three *Chestnut-sided* and two *Nashville Warblers* in I'on Swamp. The birds responded to taped recordings of their respective songs but could not be seen; the

observers are quite familiar with both species. The *Wilson's Warbler* (David Lourie, Mary Reed) was a male; black cap, bright yellow underparts, and absence of wingbars were seen.—JULIAN R. HARRISON, Biology Department, College of Charleston, Charleston, S.C. 29401.

HILTON HEAD ISLAND, S.C. (center: [not described; Spanish Wells Landing?—HL]).

17 April. The two *Roseate Terns* were closely observed by Stuart Roesler, James Baldwin, and the Compiler. The terns were feeding on mudflats in Calibogue Sound; black bill and deeply forked tail were seen, and the darker primaries of a Common Tern with them were also noted.—CORNELIA S. CHAPIN, 31 Baynard Park Road, Hilton Head Island, S.C. 29928.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: entrance of Upper Goose Creek into Pamlico River).

3 May. The *Swainson's Thrush* (Elizabeth Ball, Ethel Barkley) seen closely on 4 May was a first record for the area. *Swainson's Warbler* (Compiler, Bill Baxter, Sue and Ecky Meadows) was heard singing.—GERALDINE COX, Route 1, Box 151A, Merritt, N.C. 28556.

PAMLICO COUNTY, N.C. (center: in Florence at intersection of 1324 and 1329).

26 April. *Purple Gallinules* (Margaret Conderman, Ecky Meadows) were with Common Gallinules. *Swainson's Warblers* were in two locations and were heard by both parties; two birds were seen by the Meadows-Conderman party.—GERALDINE COX, address as above.

DILLON COUNTY, S.C. (center: Dillon).

1 May. The *Scarlet Tanager* (Compiler) was noteworthy for the area.—JOHN H. WILSON, Box 535, Dillon, S.C. 29536.

COLUMBIA, S.C. (center: intersection of Gill's Creek and Bluff Road).

26 April. James Fowles and the Compiler observed the *Connecticut Warbler* in a deciduous river swamp; the gray hood and eye ring were seen. *Blue-winged Warbler* (Glen Smith, Russell Green) was well seen along a hedgerow. *Bobolink* was new to the count, though the species is seen most every spring.—GILBERT BRISTOW, 2921 Blossom Street, Columbia, S.C. 29205.

SOUTHERN PINES, N.C. (center: 1 mile NE of Skyline).

29 April. Four *Double-crested Cormorants* (all field observers) were at Lake Surf, and one was at Thagard's Lake. All field observers also saw the immature *Herring Gulls* and the *Great Egret* seen in flight at Thagard's Lake. Dana Carter carefully observed the *Yellow-crowned Night Heron*, a first record for the area. The Compiler recorded the full-plumaged male *Cape May Warbler* and the two *Bachman's Sparrows*; the latter were in open pine woods at Fort Bragg, where the species is locally fairly common.—J.H. CARTER III, P.O. Box 891, Southern Pines, N.C. 28387.

ROANOKE RAPIDS, N.C. (center: Weldon).

4 May. Compiler saw the *Double-crested Cormorants*, *Red-breasted Mergansers*, *Bonaparte's Gulls*, *Common Tern*, and *Caspian Tern* at Roanoke Rapids Lake. The dark primaries of the *Common Tern* were seen well. The *Little Blue Heron* (Ken and Mike Knapp) and the *American Bittern* (Compiler) were at Occoneechee Neck. Compiler noted the red frontal plate and white stripe on the flank of the *Common Gallinule* at Mush Island Beaverpond. *Barn Owl* (Keith Fielder, Ray Chandler) flew across the road in front of the observers' car just before dawn; this is the first record for the count circle area. Two pairs of *Cliff Swallows* were seen by the Compiler at the NC 48 bridge over the Roanoke River, where a pair nested for the first time last

year. All field marks were seen on the singing *Tennessee Warbler* (Fielder, Chandler) along the Roanoke River at Burgwynn Farm. Only one *Swainson's Warbler* could be found in Occoneechee Neck, but noteworthy high counts were 25 *Cerulean Warblers*, 46 *Kentucky Warblers*, 369 *Bobolinks*, and 11 *White-crowned Sparrows*.—J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

PIEDMONT

HENDERSON, N.C. (center: [not described—HL]).

26 April. [The count form was only partly completed. I hope future counts will be better organized and conducted.—HL]—A.W. BACHMAN, 111 Jennette Ave., Henderson, N.C. 27536.

RALEIGH, N.C. (center: Norfolk Southern RR crossing on Lake Wheeler Road).

3 May. This year's count probably was the most successful we have ever held. The 11 *Fulvous Tree Ducks* were present in a pasture at Greenview Farm from 1 to 8 May and were seen at close range by almost all observers on the count. *Greater Scaup* (Ken Knapp), seen at approximately 20 feet, apparently was unable to fly. The *Black-billed Cuckoo* (Ann Brice, Gary McAlister) was studied well at the Dorothea Dix farm. Josh Lee observed the *Warbling Vireo* at eye level at about 20 feet; vireo bill, white eye stripe, and otherwise grayish plumage were noted. Black legs and chunky bill of the *Semipalmated Sandpipers* (Lee) were seen; birds were at the N.C. State University Dairy Pond.—R.J. HADER, 3313 Cheswick Drive, Raleigh, N.C. 27609.

DURHAM, N.C. (center: 1 mile N and 1 mile E of junction of Eno River and US 501).

19 April. Durham held a very early count this year in order to census early migrants, which are usually ignored by most count periods. Single *Upland Sandpipers* were found by Robert Ridgely and Norman Budnitz; both sightings were well documented. Ridgely also saw the *Greater Yellowlegs*, *Bank Swallow*, *Short-billed Marsh Wren*, *Water Pipit*, and several other early arrivals in a rather newly-discovered "hot spot" at the Flat River bottoms. [Ridgely provided two pages of excellent and convincing details for his many noteworthy sightings.—HL] Budnitz observed the *Cattle Egrets*, and John Horn saw the adult *Little Blue Heron*. *Blue-winged Warbler* (Pat Boyd), *Marsh Hawk* (Mark Huff), and *Northern Waterthrush* (Ridgely, Budnitz) were among a number of other noteworthy species seen and well described on the count. [This was an interesting "early" count, held 2 weeks earlier than neighboring counts, and readers should keep this fact in mind when comparing species totals between Durham and other counts.—HL]—MARK HUFF, School of Forestry, and JOHN HORN, Botany Department, both of Duke University, Durham, N.C. 27706.

CHAPEL HILL, N.C. (center: intersection of Franklin and Columbia Streets).

4 May. The main passage of transients seemed to occur a week before our count date, and so the record-breaking species count (134) and number of individuals, nearly double our typical counts, apparently represents good coverage by alert field observers.—JAMES O. PULLMAN, Route 6, Box 149, Chapel Hill, N.C. 27514.

GREENSBORO, N.C. (center: transmitter tower of Radio Station WBIG).

3 May. The wet and cool weather resulted in a low count on vultures and hawks. Probably as a result of the same influences, however, the warbler count was high this year. Charlotte Dawley observed the *Common Merganser*. [The freshwater location of the sighting was listed as one of the criteria for identification; but the Red-breasted Merganser is the more common of the two large species of mergansers on inland lakes in the Carolinas, and thus the freshwater habitat cannot be used as an aid in identification.—HL] Five parties reported *White-crowned Sparrows*, indicating that they may be somewhat less local than in the past.—DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N.C. 27408.

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Parkway).

3 May. Immature *Yellow-crowned Night Heron* was studied in marshes at Reynolda where it had been seen daily since 19 April (Compilers, Royce Hough). Compilers also reported the *Least Bittern* on several occasions during count period at a pond in Bethania. Fifteen *Osprey* sightings in the area during count period was an unusually large number. Although rare for the area, *Common Gallinules* were seen on count day at three locations (Fran Baldwin, Gardner Gidley, Paul Spain). Large numbers of shorebirds were at a sewage treatment plant during count period, noteworthy peak counts being 37 *Solitary Sandpipers*, 10 *Pectoral Sandpipers*, 50 *Least Sandpipers*, 35 *Greater Yellowlegs*, 15 *Lesser Yellowlegs*, 2 *Semipalmated Sandpipers*, 2 *Western Sandpipers*, and an amazing 12 *Dunlins*. *Bonaparte's Gull* (Royce Weatherly, Gary Adams) was in winter plumage at Salem Lake. *Yellow-bellied* and *Least Flycatchers* were each reported on two dates before the count; songs of both species were heard to confirm identification. *Yellow-bellied Sapsucker*, *Red-breasted Nuthatch*, *Brown Creeper*, *Winter Wren*, and *Hermit Thrush* were late-lingering winter residents. *Long-billed Marsh Wrens* (Wayne Irvin, Jim Orgain) were at the location where one was found on the Christmas count. Charles Frost observed all field marks on the *Philadelphia Vireo* on 30 April. Male *Golden-winged Warbler* and the *Tennessee Warbler* were seen well by many birders at Reynolda. *Nashville Warblers* were recorded on six occasions during the count period, an unusually high number. Male *Brewer's Blackbird* was studied carefully by the Compilers on 22 and 29 April, and compared with grackles, Rusty Blackbirds, and Red-winged Blackbirds. The three *Dark-eyed Juncos* (Cynthia Olsen, Gardner and Margaret Gidley) were seen in Clemmons. [The exceptionally thorough details submitted by the Compilers included notes on 37 species that were late or rare on the count day or during count period.—HL]—RAMONA R. SNAVELY, 115 Plymouth Avenue, Winston-Salem, N.C. 27104 and FRAN M. BALDWIN, 1030 Englewood Drive, Winston-Salem, N.C. 27106.

IREDELL COUNTY, N.C. (center: South Yadkin River Bridge on NC 115).

4 May. The count was held a week earlier than usual. As a result, kinglets, White-throated Sparrows, and other winter residents were still present, but we were too early for the peak of the warbler migration. *Broad-winged Hawks*, *Indigo Buntings*, and *Blue Grosbeaks* were unusually numerous this spring. The *Pintails* and *Sora* were seen by Kenny and Ronald Alexander; the latter observer found the *Least Flycatcher.* The Compiler saw the *Canada Warbler.*—JANE S. MULLEN, 908 West Front Street, Statesville, N.C. 28677.

CHARLOTTE, N.C. (center: intersection of South Boulevard and Woodlawn Road).

3 May. Total numbers of species and individuals were low for the spring count, as rain throughout most of the day prevented adequate coverage of most areas. Most of the waterfowl and shorebirds were seen at Creech's Pond and on the Catawba River. *Red-breasted Mergansers* (Compiler), *Tree Swallows* (Flo Cobey), and *White-crowned Sparrows* (Jack Hamilton) are seldom reported in this area. The *Pileated Woodpecker* (Robert Schmitt), rare in Charlotte and Mecklenburg County, was seen leaving a nest cavity located within the city limits. *House Finches* (Elizabeth Clarkson), regular winter visitors at feeders in recent years, were still present on count day. One pair stayed in Elizabeth Clarkson's yard during the summer of 1974.—DANIEL E. READ JR., 1101 Rosewood Circle, Charlotte, N.C. 28211.

GREENVILLE, S.C. (center: intersection of 29 and 291).

3 May.—ROSA LEE HARDIN, Cleveland, S.C. 29635.

CLEMSON, S.C. (center: 3.5 miles SW of intersection of US 76 and SC 93 in Clemson).

6 May. A heavy northbound migration on the evening of 5 May removed a large percentage of the migrants from the area; thus, even with much better coverage of the count circle this spring over last spring, we recorded eight fewer species. *Eared Grebe*, in breeding plumage on a sewage pond at Pendleton, was originally identified

as a Horned Grebe until the correct identity was determined on 10 May by the Compiler. The Compiler also saw the breeding-plumaged *Franklin's Gull* on 8 May near Townville. *Black Rails* were recorded on two occasions during the count period. The Compiler has submitted full details for these three species as field notes in *Chat. Connecticut Warbler* was a non-singing male seen at close range by Sid Gauthreaux in his yard; slate-colored hood and complete, white eye ring were conspicuous. *Dickcissel* (Compiler) was a singing male on territory (seen at same location twice later in May) near Pendleton. The five *Glossy Ibis* were seen by Gaston Gage, the Compiler, and Gauthreaux on several occasions before count day. *Philadelphia Vireo* (Adair Tedards and party) on 3 May was detected by song and confirmed by its yellowish underparts. A number of other rare sightings were made by the Compiler during count period; information on these records has been submitted for publication in *Chat* as "Briefs for the Files."—HARRY E. LeGRAND JR., Department of Zoology, Clemson University, Clemson, S.C. 29631.

ELKIN-RONDA, N.C. (center: 3 miles N of Elkin at intersection of US 21 and US 21 Business).

26 April. *Short-billed Marsh Wren* (Jerry and Bobby Tysinger) was seen at 25 feet for about 5 minutes; absence of eye stripe, presence of stripes on the crown and back were noted.—LIN HENDREN, P. O. Box 148, Elkin, N.C. 28621.

CALDWELL COUNTY, N.C. (center: Lenoir).

5 May.—HELEN MYERS, 310 Beall Street NW, Lenoir, N.C. 28645.

MOUNTAINS

YANCEY-McDOWELL COUNTIES, N.C. (center: Buck Creek Gap).

10 May.—JOYCE E. HALL, Route 8, Box 1136, Asheville, N.C. 28806.

BUNCOMBE COUNTY, N.C. (center: intersection of US 70 and SR 2740 in Swannanoa).

3 May. *Lesser Scaup* (Chris Rustay), apparently injured or unable to fly, was feeding with several domestic ducks on Kenilworth Lake. Two *Ospreys* and four *Common Loons* were seen by many observers, including the Compiler, at Burnett Reservoir. *Common Gallinule* (Rustay) was seen at close range at the headwaters of Kenilworth Lake. The four adult *Ring-billed Gulls* were seen by many birders in a plowed field on the Warren Wilson College grounds; a first spring count record. Rustay observed the *Connecticut Warblers* and the *Wilson's Warblers.*—ROBERT C. RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

BREVARD, N.C. (center: 5 miles SE of Brevard at Rich Mountain Lookout Tower).

3 May. Hardly worse weather could be envisioned (heavy fog and rain much of the day), yet this was by far the best of our three counts, partly because of increased levels of experience of our counters. Lydia and Paul Barrett heard the *Olive-sided Flycatcher* on many dates in April and May, and observed the bird on two occasions this spring. [Is this species breeding in the Sherwood Forest area? If so, it would be quite noteworthy, in view of the scarcity of present-day summer records in the North Carolina mountains and the fairly low elevation of the observation.—HL] *Ospreys* were seen a number of times in different places during the week before the count (Compiler, Susan Holland), and the late *Marsh Hawk* was seen by Genevieve Lilly and Bill Simpkin. Robert Starr reported the *Black-billed Cuckoo* and *Cerulean Warbler. Cape May Warblers* were "everywhere" throughout the count period. Count period *Fox Sparrow* (Helen Pearch) was first noted by its loud scratching and then seen well. *Tennessee Warblers* were observed separately by the Compiler and Helen Pearch. The *Mallards* are nesting in Sherwood Forest (Kenneth Roberts). The late *Bufflehead* was reported by Gaylord Lyon. *Rusty Blackbirds* (Hervey Roberts) were

found in two locations.—WALTER C. HOLLAND JR., 290 Maple Street, Brevard, N.C. 28712.

FIELD OBSERVERS

MOREHEAD CITY, N.C.: John Fussell II, John Fussell III, R.J. Hader, Wayne Irvin, Chuck and Genevieve Manooch, Don McCrimmon, Allyn and Joanne Powell, T.L. Quay, David Whitehurst, Mal Whitsett, Ray Winstead, John Wright.

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GREENVILLE, S.C.: Ruth Gilreath, Rosa Lee Hardin, Gladys Hart, Lillie Hart, Ellanore McAdoo, May Puett, Gary Worthington.

CLEMSON, S.C.: Bill Alexander, J.P. Crouch, Sid Gauthreaux, Paul Hamel, Clay Hodges, Harry LeGrand, Frank Moore, Kerry Reese. Charlie Gage, Gaston Gage, Joan Geiger, Roland Geiger, Larry Luckett, Vivian Smith, and Adair Tedards participated on a rain-postponed count on 3 May, but were unable to help on the rescheduled count.

ELKIN-RONDA, N.C.: Lin Hendren, Tom Hendren, Lewis Petree, Bill Roth, Cissie Roth, W.P. Smith, Bobby Tysinger, Jerry Tysinger.

CALDWELL COUNTY, N.C.: Margaret Harper, Clara Manchester, E.M. Manchester, Helen Myers, Sarah Parker, Ann Whisnant.

YANCEY-McDOWELL COUNTIES, N.C.: John Hall, Joyce Hall, Mark Hall, Robert Ruiz.

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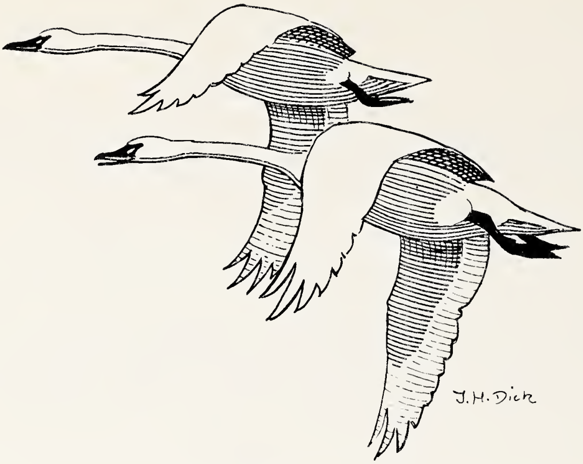

General Field Notes

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Spring Record of Eared Grebe in Northwestern South Carolina

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27 May 1975

During the first 10 days of May 1975, one to two Horned Grebes (*Podiceps auritus*) in breeding plumage were reported on a small sewage pond at Pendleton, S.C. On 10 May I received word that a male Greater Scaup (*Aythya marila*) was on this pond; so I decided to take a look at the scaup and a grebe that were present there earlier in the day, because 10 May was a very late date for these species in South Carolina. The scaup was indeed a Greater, but the grebe was not a Horned but an Eared Grebe (*Podiceps caspicus*). I observed the grebe for approximately 10 minutes in excellent light with a 20X scope at 75 yards. It was constantly diving during this time and never remained on the surface for more than 5 seconds at a time, yet I obtained excellent views of it. The thin, blackish neck immediately separated the bird from the Horned, which has a thicker, chestnut colored neck. Also, the head was more rounded than the head of the Horned, and the ochre face patch covered all the cheek region, directly behind the eye. In the Horned Grebe, the ochre face patch is behind but primarily above the eye, forming a crest. The black crest of the Eared was also visible.

The Eared Grebe was seen later in the afternoon of 10 May by Sidney Gauthreaux, Frank Moore, and Kerry Reese; all concurred with my identification. I last saw the bird on the pond on 15 May.

The identity of the second grebe is unknown. The birders who saw two grebes on 6 May (Clemson Spring Count day) had only binoculars and assumed both birds were Horneds, because the Eared is extremely rare in the southeastern United States. The observers told me that the two birds looked identical, indicating that the second may also have been an Eared. Having found no evidence that Horned Grebes ever were present on the pond this spring, I have tallied one Eared Grebe and no count-day Horned Grebe on the Clemson Spring Count. Because of the rarity of the Eared Grebe in the Southeast, I have decided not to count the second grebe also as an Eared.

Surprisingly, this is not the first record of the Eared Grebe for northwestern South Carolina, as Sidney Gauthreaux observed one on Lake Hartwell at Clemson on 27-28 January 1973 (*Chat*, 37:52). The only other record for the state is a bird seen by Walter Dawn and collected by E. Milby Burton at Charleston on 14 January 1959 (*Auk*, 76:521).

Cinnamon Teal at Wilmington, N.C.

KITTY KOSH
188 Lake Forest Parkway
Wilmington, N.C. 28401

PATRICK M. HUNT
2015 Barnett Avenue
Wilmington, N.C. 28401

5 February 1975

On 29 December 1974 we flushed a drake Cinnamon Teal (*Anas cyanoptera*) accompanied by three hens out of the weeds at the edge of Greenfield Lake. The teal swam into open water where the drake raised his body and spread his wings. This enabled us to see all field marks clearly with 7 X 35 binoculars at a distance of approximately 50 feet. The drake's head was cinnamon red and lacked facial markings. He was red on the breast and belly and down the back between the wings. He had a blue patch in the upper edge of the wing and a green speculum. The three hens bore all the markings of Blue-winged Teal (*Anas discors*).

Edna Applebury joined us, and we observed the Cinnamon Teal drake and three questionable hens swimming and feeding for about 20 minutes. The four teal were still on the lake when we departed, but were not located on subsequent days.

[This appears to be the fourth sight record of this Western species in North Carolina.—DEPT. ED.]

A Summer Sighting of Cooper's Hawks Near Chapel Hill, N.C.

ROBERT P. TEULINGS
ELIZABETH P. TEULINGS
Route 2, Chapel Hill, N.C.

JAMES O. PULLMAN
Chapel Hill, N.C.

30 August 1974

On 29 June 1974, while hiking along New Hope Creek in the Korstian Division of the Duke Forest, Orange County, N.C., a relatively undisturbed area between Durham and Chapel Hill, we saw three large accipiters soaring and diving above us. Their calls were heard as the birds drifted slowly eastward, remaining in view for about 1 minute. Several visual marks including the size, tail shape, and profile of the head-shoulder area suggested that the birds were Cooper's Hawks (*Accipiter cooperii*). Subsequent comparison of the calls with recordings confirmed the identification.

Local summer records for the Cooper's Hawk are extremely rare, as is generally the case for the North Carolina piedmont. A recently compiled annotated checklist for the Chapel Hill area (Charles H. Blake, unpub.) cites a 1935 breeding record. No recent summer sightings have been reported.

Franklin's Gull in South Carolina

HARRY E. LeGRAND JR.
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16 May 1975

On the morning of 8 May 1975, I was scanning a large plowed field about 1 mile SE of Townville, Anderson County, S.C., when I spotted a gull following a tractor that was replowing the field. With the aid of 7 X 50 binoculars, I immediately identified the bird as a Franklin's Gull (*Larus pipixcan*) in full breeding plumage. I watched the gull for approximately 5 minutes as close as 100 yards, and during this time it was either circling over the field or following the tractor, hawking for insects. The dark hood, slate-colored mantle, conspicuous white rear border of the wings, and characteristic white stripe near the wing tip were easily seen in flight. Even though the undersides of the wings were white, the white stripe near the tip was easily visible from below as a "window." The black tips to the primaries were visible from above, but they were more reduced in this bird than in those pictured in field guides, which show a narrow white stripe and a broader black tip.

About 20 minutes after the above observation, I returned to the field. The tractor had stopped running, and the bird was sitting in the field, occasionally feeding and occasionally circling in the air for a few seconds before returning to the ground. I was able to examine the resting bird closely through a 20X scope at approximately 100 yards. The legs were blackish, the bill was deep red, and a white eye ring (broken behind the eye and incomplete in front) was conspicuous. The tips of the folded wings were mostly white.

After watching the gull for several minutes, I returned to Clemson University and brought Frank Moore and Sidney Gauthreaux, who had a camera mounted on his Questar scope, to the field 3 hours later to obtain photographic documentation. Despite extensive searching, we were unable to locate the gull in the field, in surrounding fields, or on nearby Lake Hartwell.

Only one other record of the Franklin's Gull is known for the Carolinas. An immature was "wounded by gun shot at the Catawba River, within 12 miles of Charlotte, N.C.," on 13 October 1952 (*Chat*, 17:23-24). Although *South Carolina Bird Life* (Sprunt and Chamberlain, 1970) carries this record, it also states that the bird actually was found in North Carolina. Even though the 1952 bird probably visited South Carolina (there is no way of knowing for certain), the Franklin's Gull I observed near Townville is the first definitely within the state, and one of the relatively few spring records for the Atlantic Coast states.

Bell's Vireo Seen in Wake County, N.C.

ELOISE F. POTTER
Route 3, Box 114 AA, Zebulon, N.C. 27597

10 August 1974

About 18:00 on 10 August 1974, my husband and I heard an unfamiliar finch-like song in the yard of our home 3.5 miles N of Zebulon, Wake County, N.C. The mysterious finch flew away before we could identify it; so Jack went into the house, leaving me in the yard with a 7 X 50 binocular in hand. The resident chickadees and titmice still were calling excitedly and chasing about the trees near the edge of the golf course. The object of their attention seemed to be a small bird hovering at the tip of a branch. The small size, generally greenish color, white around the eye, and hovering flight reminded me of a Ruby-crowned Kinglet; therefore, I followed the bird when it flew to a nearby oak. Here, in good light at a distance of no more than 30 feet, I saw a vireo completely new to me. The crown, cheek, and back were uniform light olive-green. The tail and wings were dark greenish, and wing bars were not at all distinct. The throat and breast were white; the under tail coverts and belly were yellow; and the sides appeared to be white. White spectacles outlined the dark eye. I watched the bird for several minutes as it crept about the branches, hovered at their tips, and twice remained motionless in full side view. At no time did I see any field mark that suggests the bird was anything other than a Bell's Vireo (*Vireo bellii*).

Red-eyed, White-eyed, and Yellow-throated Vireos nest in or near my yard, so I am accustomed to seeing juveniles of these species. I am aware that young White-eyed Vireos have dark eyes; but the white spectacles immediately eliminate this possibility just as effectively as the vireo's heavy bill removed the kinglet from consideration.

Although there is no published record of this Western and Midwestern species from the Carolinas, the Bell's Vireo is known to occur east of the Appalachian Mountains. The first collected specimen for the New York City area was taken on 25 September 1970 by Paul Buckley and party (*American Birds*, 25:35). In Florida the species is known as a fall transient and winter visitor. Four Bell's Vireos were seen at Key Biscayne on 14 September 1968, and one was banded at Homestead on 5 November 1968 (*American Birds*, 23:39). One Bell's Vireo was reported from Fort Lauderdale on 26 December 1966, where one had been found twice previously in winter (*American Birds*, 21:411).

[The acceptance by the records committee of this carefully documented observation and its publication in *The Chat* will allow Bell's Vireo to be placed on the Hypothetical List for North Carolina. This species, very difficult to identify unless the observer is thoroughly familiar with the species, will require further documentation before being placed on the official North Carolina list. Observers are urged to obtain photographs or if possible to arrange for the legal collection of such birds for positive verification.—DEPT. ED.]

The Advent of the Song Sparrow as a Breeding Species in the Southern Blue Ridge Mountain Province

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10 March 1975

The Song Sparrow (*Melospiza melodia*) has extended its breeding range into the southern Blue Ridge Mountain Province and adjacent piedmont within recent historical times. Formerly, the bird occurred only as a winter resident in the region, arriving in early October and departing by late April (J.S. Cairns, unpublished records). In the early 1900s, however, the species became established as a summer resident down the main crest of the southern Appalachian mountains and then began extending its range onto the piedmont plateau (Pearson et. al., 1919; Burleigh, 1958; Sykes, 1966). Previous analyses of this influx, however, have overlooked several early records.

In an unpublished manuscript, J.S. Cairns (1894) made the following observation regarding the Song Sparrow in Buncombe County:

> "An abundant winter visitor and a rare summer bird. Found on Craggy Mtn May 20th & June 1st 1892 & 93."

Cairns' previous publications (1887, 1889, 1891) had listed the species as a winter resident only. Subsequently, Cairns mentioned the bird in a letter to William Brewster, dated 11 March 1895:

> "Have found Song Sparrows ... several times on Craggy in the month of June."

Cairns' death in June 1895 precluded any further observations from Buncombe County until Pearson found the species breeding there in 1902.

Farther south, Bradford Torrey (1898) discovered the species singing in "a dense swampy thicket" on the Highlands Plateau, Macon County, N.C., on 25 May 1896. Recognizing the significance of the record, Torrey remarked:

> "So far as I am aware, no bird of this kind has ever before been reported in summer from a point so far south."

Except for a single report by Laurents at Cranberry in 1892, these observations are the only known summer records of the species from western North Carolina prior to 1902. Although only single birds were reported, the records by Laurents, Cairns, and Torrey suggest the rapid establishment of the Song Sparrow as a summer resident in widely scattered locales through the southern Blue Ridge in the 4-year period of 1892-1896. In contrast, the subsequent spread onto the piedmont appears to have been a much slower process, occurring after a sizeable breeding population had become established in the Blue Ridge.

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BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
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(All dates 1975)

COMMON LOON: Over 100 were seen in flight off the beach at Fort Macon State Park near Atlantic Beach, N.C., during a 90-minute period of observation on 12 April by Robert Hader. Late inland sightings of single migrants were noted on 16 May at Roanoke Rapids Lake, Halifax County, N.C., by Merrill Lynch and at Lake Hartwell near Clemson, S.C., on the same date by Harry LeGrand.

HORNED GREBE: A lingering individual was present at Pivers Island near Morehead City, N.C., as late as 2 June, John Fussell.

EARED GREBE: An inland transient was seen at McFayden Lake in Cumberland County, N.C., on 1 May by Henry Rankin Jr. and P.J. Crutchfield.

DOUBLE-CRESTED CORMORANT: Over 2,500 were seen massed at Oregon Inlet on the North Carolina coast on 22 April by Robert Anderson. Elsewhere, a noteworthy inland sighting was recorded on 18 April at Lake Hartwell near Clemson, S.C., where a single bird was observed by Harry LeGrand. At other inland reservoirs, four were seen on 30 March at Lake Wheeler near Raleigh, N.C., by James Mulholland, and four on 13 April at Roanoke Rapids Lake, Halifax County, N.C., by Merrill Lynch.

GREAT BLUE HERON: A sizeable inland flock of 16 was noted on 8 April near Winston-Salem, N.C., by Hank and Kay Kludinsky.

CATTLE EGRET: Four inland transients were seen at Pendleton, S.C., on 18 April by Harry LeGrand, and a flock of 18 was found near Fayetteville, N.C., on 22 April by P.J. Crutchfield, Henry Rankin Jr., and Brad Thomason. Elsewhere, two spring visitors were seen near Raleigh, N.C., on 24 April by Robert Hader, and one at Chapel Hill, N.C., on 12 May by James Pullman. Another inland migrant was late and unusual at Southern Pines, N.C., on 30 May, observed by Jay Carter.

GREAT EGRET: An inland visitor was noted at Lake Wheeler near Raleigh, N.C., on 22 March by Robert Hader.

SNOWY EGRET: One was seen in Cumberland County, N.C., near Fayetteville on 29 April by Henry Rankin Jr., Brad Thomason, and P.J. Crutchfield.

BLACK-CROWNED NIGHT HERON: An adult and immature were observed in a wooded swamp on the Johnston Farm in the Occoneechee Neck section of Northampton County, N.C., on 5 April by Merrill Lynch, a rare local spring occurrence. Noteworthy also were two adults seen inland at Lake Hartwell near Clemson, S.C., on 9 April by Sidney Gauthreaux, and one near Swannanoa in Buncombe County, N.C., on 14 May by Robert Ruiz.

LEAST BITTERN: One was found near Townville, Anderson County, S.C., on 20 May by Harry LeGrand.

WHITE IBIS: An adult and two immatures were present on 4 April at Pea Island, N.W.R. on the North Carolina Outer Banks. This location is north of the species' known breeding range. The observers were J. Akers and C. Wonderly.

FULVOUS TREE DUCK: A flock of 11 was present at Greenview Farm in Wake County, N.C., near Raleigh 1 May through 8 May, first reported by James Mulholland and later seen by other observers.

PINTAIL: Seven males and five females were seen at Lake Julian in Buncombe County, N.C., on 8 February by Bill Duyck and Bob Ruiz, a rare occurrence for western North Carolina.

BLUE-WINGED TEAL: A late spring straggler was seen near Pendleton, S.C., on 13 May by Harry LeGrand.

REDHEAD: An inland transient was seen on the Dan River in Caswell County, N.C., on 6 May by Fenton Day.

GREATER SCAUP: A male was present on a sewage pond near Pendleton, S.C., on 10-12 May, a late and rare visitor for that inland locality. The bird was observed by Harry LeGrand, Sidney Gauthreaux, and Kerry Reese.

COMMON GOLDENEYE: A single male was seen on Burnett Reservoir in Buncombe County, N.C., on 22 February by Walter Holland Jr. and family, a noteworthy local record.

OLDSQUAW: A male was observed by Roland Sargent, Glenn Coven, and Margaret Finch on Lake Tahoma, McDowell County, N.C., on 8 March.

BLACK SCOTER: Three late migrants were seen by Robert Hader off the beach at Fort Macon State Park near Atlantic Beach, N.C., on 25 May.

RED-BREASTED MERGANSER: One was seen on 12 May off North Litchfield Beach, S.C., by F.M. Probst.

SWALLOW-TAILED KITE: One was seen north of the species' usual range on 1 May at Emerald Isle, N.C., by John Fussell, and another at Pea Island, N.W.R. on 24 May by Alan Gallagher.

COOPER'S HAWK: A 24 May sighting of a single bird was recorded at Clemson, S.C., by Harry LeGrand. Whether this bird was a late migrant or a summer resident is not known.

ROUGH-LEGGED HAWK: One was seen on 12 March at Carolina Sandhills N.W.R., Chesterfield County, S.C., by Paul McKenzie.

MARSH HAWK: A rather late spring sighting of an individual was recorded at Carolina Sandhills N.W.R., Chesterfield County, S.C., on 10 May by Paul McKenzie.

BALD EAGLE: An immature was seen on 20 April at Santee N.W.R., S.C., by Sidney Gauthreaux, and another at Cedar Island N.W.R. in Carteret County, N.C., by Ted Best.

AMERICAN KESTREL: A male was seen twice, on 13 and 18 May, near Pendleton, S.C., by Harry LeGrand. Elsewhere, Jay Carter observed one (possibly two birds) at Carolina Sandhills N.W.R. in Chesterfield County, S.C., on 28 May. Another individual, described as a fledgling, was found in an airport hangar at Walterboro, S.C., in late May by W.B. Cheney. The bird was examined and photographed on 1 June by Gerald Knighton.

VIRGINIA RAIL: A first record for Caldwell County, N.C., has been reported by Helen Myers who identified an injured bird found at Lenoir on 17 April. Elsewhere in the western piedmont, single birds were noted near Townville, S.C., on 8 April and 9 May by Harry LeGrand. One was also seen in northwestern Caswell County, N.C., on 5 May by Fenton Day.

BLACK RAIL: At least six were heard calling on 29 May at North River Marsh near Morehead City, N.C., by John Fussell.

LONG-BILLED DOWITCHER: Three were seen on 20 April at Huntington Beach State Park near Murrells Inlet, S.C., by Larry Copenhaver and Paul McKenzie.

WESTERN SANDPIPER: Seven birds were seen at the Braswell Farm east of Rocky Mount in Nash County, N.C., on 25 April by Louis Fink. A flock of nine was later seen there by the same observer on 9 May.

WILSON'S PHALAROPE: One was seen at Deveaux Bank near Charleston, S.C., on 1 June by John H. Dick.

BLACK-HEADED GULL: An immature was seen near Murrells Inlet, S.C., at Huntington Beach State Park on 19 April by Paul McKenzie.

BONAPARTE'S GULL: Inland visitors were numerous this spring at Lake Hartwell near Clemson, S.C., where peak counts of 101 were recorded on 8 April and 102 on 17 April by Harry LeGrand. At Gaston Lake in Warren County, N.C., and adjacent Roanoke Rapids Lake in Halifax County, at least 150 were counted on 13 April by Merrill Lynch and Keith Fielder.

COMMON TERN: Seven were sighted as far inland as Lake Hartwell near Clemson, S.C., on 4 May by Harry LeGrand.

CASPIAN TERN: Five were uncommon inland visitors at Roanoke Rapids Lake, sighted near Vultare, N.C., on 13 April by Merrill Lynch. At Lake Hartwell near Clemson, S.C., four were seen on 15 April and two on 3 May by Harry LeGrand.

FORSTER'S TERN: Twelve were seen on 9 May and one on 12 May at Lake Hartwell near Clemson, S.C., by Harry LeGrand.

BLACK TERN: Three migrants were seen at Cape Lookout, N.C., on 26 May by Robert Hader, and one at Huntington Beach State Park near Murrells Inlet, S.C., on 31 May by F.M. Probst.

WHIP-POOR-WILL: One was heard calling near Beaufort, N.C., on 29 May by John Fussell and Vince Guida, the latest spring date the species has been recorded in that coastal locality. Chuck-will's-widow generally replaces the Whip-poor-will as the summer breeding resident east of the fall line.

BLACK-BILLED CUCKOO: Two were noted as uncommon spring transients in the Charleston, S.C., area on 5 May by Perry Nugent.

BARN OWL: One was seen on Bogue Bank on 28 March by Robert Hader and two at Cedar Island, N.C., on 27 May by John Fussell, noteworthy local occurrences for Carteret County.

SAW-WHET OWL: Three were heard along the Blue Ridge Parkway near Devils Courthouse in Haywood County, N.C., on the night of 24-25 May by Larry Copenhaver and Paul McKenzie.

RUBY-THROATED HUMMINGBIRD: One was present as early as 22 March at Whispering Pines, N.C., observed by Roberta Davis.

GRAY KINGBIRD: A single bird was closely studied at McClellanville, S.C., by William and Wilma Meteer on 20 May.

WESTERN KINGBIRD: One was found on 28 April at Huntington Beach State Park, Georgetown County, S.C., by F.M. Probst. This is apparently the first spring record for South Carolina.

SCISSOR-TAILED FLYCATCHER: Two sightings were recorded on the South Carolina coast during the spring period. An individual was seen at Huntington Beach State Park on 16 April by F.M. Probst, and another at Isle of Palms near Charleston on 19 April by S.A. Gauthreaux.

WILLOW FLYCATCHER: At least five birds were seen and identified by song along Johnson Creek near Waynesville, N.C., in Haywood County on 25 May by Paul McKenzie and Larry Copenhaver. At Raleigh, N.C., one was heard singing on 14 May at Lake Raleigh by Robert Hader. One was also noted at North Wilkesboro, N.C., on 5 June by Wendell Smith.

RED-BREASTED NUTHATCH: A late-lingering individual was seen on 18 May in Forsyth County, N.C., near Winston-Salem by Jim and Pat Culberson.

SWAINSON'S THRUSH: An early migrant was seen near Durham, N.C., on 15 March by Patrick Boyd.

PHILADELPHIA VIREO: One was a good find near Townville, S.C., on 3 May carefully observed by Adair Tedards. Elsewhere, two were seen near Bethune, S.C., on 5 May by Paul McKenzie.

WARBLING VIREO: One was a rare piedmont transient at Chapel Hill, N.C., on 3 May, observed by James Pullman and Elizabeth Teulings. In the western section, a singing male, possibly a local breeder, was noted along Johnson Creek near Waynesville, N.C., on 25 May by Larry Copenhaver and Paul McKenzie.

SWAINSON'S WARBLER: Twelve were heard singing along the Big and Little Lynches Rivers in the vicinity of Bethune, S.C., on 5 May by Paul McKenzie. In the western piedmont, individuals were found present in bottomland habitat near Central, S.C., on 11 May and 27 May by Harry LeGrand, indicating the possibility of nesting in that locality.

BREWSTER'S WARBLER: An individual of this hybrid form was seen on 8 May at Mason Farm near Chapel Hill, N.C., by Harold Frazier.

ORANGE-CROWNED WARBLER: Single transients were seen on 18 March at Santee N.W.R. by Paul McKenzie; 7 April at Greer, S.C., by Gary Worthington; and 2 May at Chapel Hill, N.C., by William and Margaret Wagner.

BAY-BREASTED WARBLER: One seen in Francis Marion National Forest, S.C., on 27 April by Paul McKenzie was a rare coastal plain transient well east of the species' normal spring migration route.

CERULEAN WARBLER: Single transients were reported seen in Francis Marion National Forest, Clemson, and the Bethune, S.C., area as well as Caswell County, N.C., during the period 22-27 April. Three probable summer residents were found in the vicinity of Reynolds Gap along the Blue Ridge Parkway in Buncombe County, N. C., on 25 May by Paul McKenzie and Larry Copenhaver.

NORTHERN WATERTHRUSH: Late spring occurrences were recorded on 25 May at Williamston, N.C., by Merrill Lynch and on the same date at Chapel Hill, N.C., by James Pullman, Robert Teulings, and Elizabeth Teulings.

WILSON'S WARBLER: Individuals were noted as uncommon to rare spring transients on 1 May at Southern Pines, N.C., by Jay Carter; 2 May at Chapel Hill, N.C., by Owen McConnell et al.; 3 May in the Asheville, N.C., vicinity by Chris Rustay; and 5 May at Raleigh, N.C., by Gail Whitehurst. One was also seen on 19 May at Clemson, S.C., by Harry LeGrand.

EVENING GROSBEAK: A late lingerer was seen at Reidsville, N.C., on 20 May by Ruth Noonan.

WHITE-CROWNED SPARROW: Winter visitors remained well into May at several North Carolina locations. The latest reported sightings were by James Pullman at Chapel Hill and Cynthia and Mary Olsen at Winston-Salem on 17 May.

LINCOLN'S SPARROW: One was seen near Clemson, S.C., on 9 May by Harry LeGrand.

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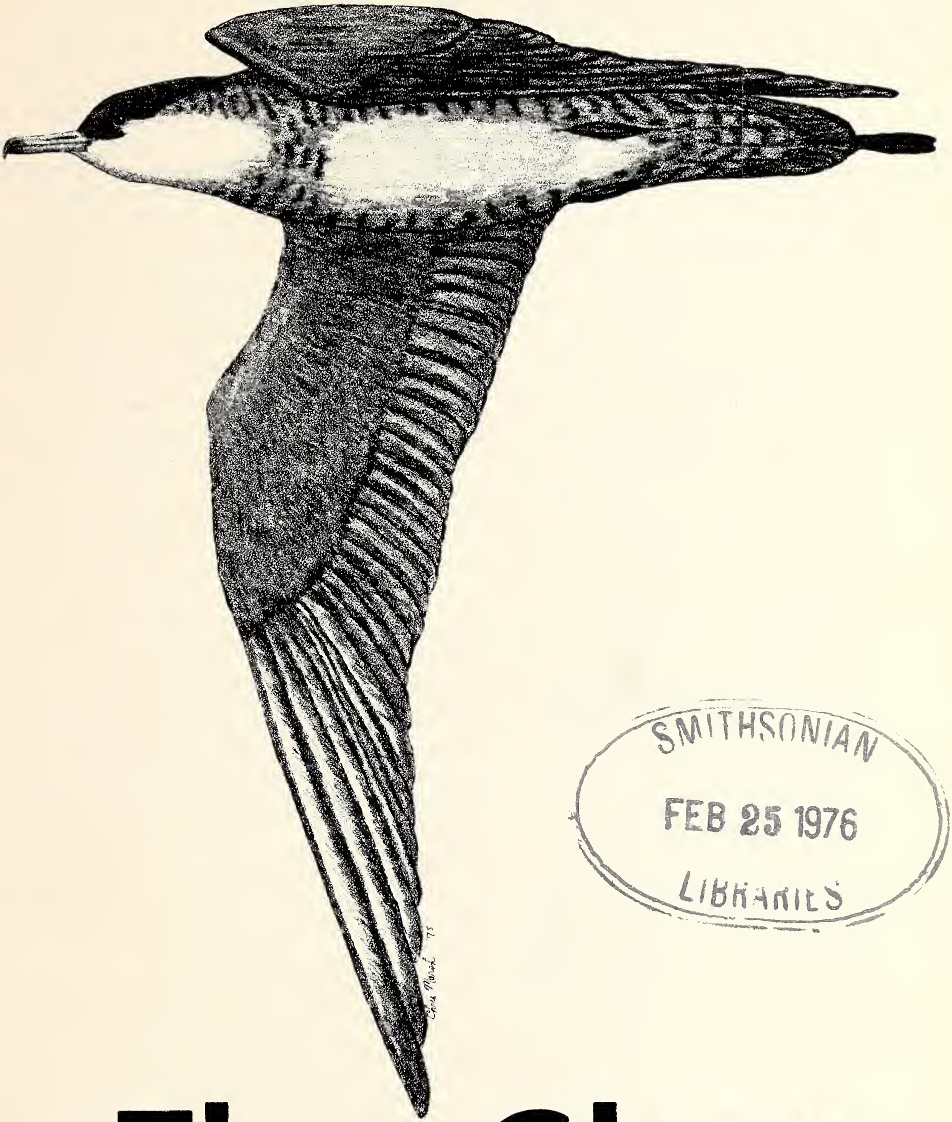

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OUR COVER—Chris Marsh drew the light-phase Pomarine Jaeger, a species that occurs mostly in winter off the Carolina coast. During spring migration, jaegers sometimes can be found amid the flocks of northbound pelagic birds that swing close inshore as they round Cape Point on the Outer Banks. The owl on page 21 was contributed by Chris and his fiancee, Barbara Pugh.

Room L

TV Tower Kills in Eastern North Carolina

JOSEPH H. CARTER III and JAMES F. PARNELL

Discovery of a large bird kill at the WECT TV tower in Bladen County, N.C., in the fall of 1970 led us to study TV tower mortality in southeastern North Carolina during the fall migrations of 1971 and 1972. Autumn passages of birds across the coastal plain of North Carolina are little known, and TV tower mortality offers a significantly large sample of nocturnal migrants. Our results add to the knowledge of bird migration in southeastern North Carolina and to the information accumulating on mortality of nocturnal migrants at tall man-made structures throughout the United States.

STUDY AREAS

The WECT tower is located off NC 53, 5 miles SE of White Lake in Bladen County, N.C., and about 42 miles inland from the Atlantic coast. The WWAY tower is located off NC 87, 3 miles N of Boiling Spring Lakes in Brunswick County, N.C., and about 10 miles from the coast. We were unable to check the towers each day, but did visit them after the passage of each cold front and after most cloudy nights regardless of frontal activity. In 1971 the towers were first visited on 23 September. The presence of badly decomposed birds along with freshly killed birds indicated that we missed at least one early kill. In 1972 visits began in early August, and no kills were missed. Visits continued until mid-November both years.

The WECT tower stands 1994 feet above the ground. It is the tallest TV tower in the eastern United States. The 27 guy wires are attached at nine levels. Nine wires extend S, nine WNW, and nine NE. The longest guy wires are 2700 feet and reach the ground 1400 feet from the tower base.

The WWAY tower stands 1188 feet above ground. Its 27 guy wires are attached at seven levels. Nine extend S, nine NE, and nine NW. The longest guy wires are 1550 feet and reach the ground 800 feet from the tower base.

Both towers are lighted according to FCC regulations with a combination of flashing and nonflashing red lights. A small control building is located about 25 feet from the base of each tower, and a small dirt parking lot is in front of each control building. Most of the area around the towers is open weed-covered sand. All guy wire lanes are approximately 20 feet wide, and were vegetated with grass and low weeds at the time of the study. Beyond the open ground immediately surrounding the towers were young pine plantations and shrub bogs.

RESULTS AND DISCUSSION

The WECT tower was completed in January 1969, and employees indicated that a sizable number of birds were killed during the fall of 1969. The WWAY tower was completed in October 1964. We were unable to obtain any information on bird mortality at this tower prior to the initiation of the study. Our results and comments from tower employees indicate that large kills occur annually during September and October at the WECT tower under certain weather conditions. Large kills appear to occur much less frequently at the WWAY tower.

Our study of tower mortality was begun after we found an estimated 1000 birds at WECT on 30 October 1970 (Table 1). Apparently, the birds were killed on several different dates. The towers were not checked further in 1970, but we conducted a regular program in the fall of 1971 and again in the fall of 1972. During these 2 years birds were found on 42 occasions. We recorded a total of 3070 individuals of 84 species. The 1970 kill included four birds not found in 1971 or 1972, bringing the total to 88 species.

During the fall of 1971, large kills were typically associated with low ceilings and northerly winds. These conditions existed during and after the passage of cold fronts. Low ceilings associated with cold fronts were present during all major kills in the fall of 1971 except the one on 3-4 and 4-5 October at WWAY. According to TV station employees the bulk of this kill occurred the night of 3-4 October, 3 days after the passage of Hurricane

Ginger. Prior to passage of the storm, the Wilmington area had experienced strong northerly winds for several days. Apparently these winds concentrated migrant land birds along the coast. After the storm passed, a large flight of these birds moved south along the coast before low ceilings associated with the storm had dissipated. These birds moved on the first night after the winds had shifted back to the northerly quadrant. It was under these conditions that a major kill occurred at WWAY on 3-4 and 4-5 October. Nearly 1000 birds were picked up on the morning of 5 October. On the same date we found 111 birds at WECT, all very fresh.

In the fall of 1972, cold fronts usually passed quickly through our vicinity, resulting in generally unsuitable conditions for major kills. Only two kills (both at WECT) numbered over 50 birds. The difference in these 2 years is reflected best by the 387 individuals found during the fall of 1972, compared to 2683 found the previous fall.

Major problems were the loss of individuals in dense vegetation or to predators. No attempts were made to document predation, but numerous piles of feathers and disjointed wings and legs pointed to heavy predation at both towers, particularly WECT. Ants were the main problem in warm weather. As cooler weather began to decrease ant activity, losses to other predators became more apparent. Crows (*Corvus* sp.), Great Horned Owls (*Bubo virginianus*), House Cats (*Felis domesticus*), and Gray Foxes (*Urocyron cinereoargenteus*) were seen at or near WECT. Evidence indicated that most of the vertebrate predation was caused by these species. Only crows were seen at WWAY.

Loss of birds in dense vegetation was very heavy at both towers. Birds that did not fall directly below the guy wires or in the immediate vicinity of the tower bases were not found. Even those falling in the open areas often were overlooked in the patches of weeds. The great height of WECT and its many long guy wires undoubtedly resulted in birds falling over a wide area during some kills. It is impossible to estimate how many were lost, but the figure was undoubtedly substantial.

Typically the heaviest warbler mortality, excluding the Yellow-rumped Warbler, occurred in late September and early October. Heavy Yellow-rumped Warbler and sparrow mortality occurred in mid to late October. This relates well to the known migratory patterns for these two groups. The Common Yellowthroat (588) was the most numerous and frequent bird represented in the kills. The Black-throated Blue Warbler (289), Ovenbird (268), Yellow-rumped Warbler (218), Gray Catbird (164), Red-eyed Vireo (149), American Redstart (141), and Black-and-white Warbler (115) had the next highest 2-year individual counts. All these species, except the Yellow-rumped Warbler, were represented in large numbers in the kill at WWAY on 3-4 and 4-5 October 1971. The Black-throated Blue Warbler was considered to be an uncommon fall transient in this area. The large numbers of these other species were to be expected.

Most unexpected was the discovery of Seaside Sparrows at WECT. We found 4 in 1970, 11 in 1971, and 2 in 1972. These occurrences indicate that Seaside Sparrows migrate regularly over inland portions of southeastern North Carolina.

Most species were found within the normal period for expected migratory passage in this area. Unusually early or late occurrences are discussed in the species accounts.

ANNOTATED CHECKLIST

Following is an annotated checklist of all avian species found during this study. Dates are those of pick-up. Generally, the birds were killed 12 to 36 hours before recovery. A notable exception was the large kill of 367 birds found at WECT on 29 October 1971, apparently the product of several nights' accumulation between 24 and 29 October. When four or fewer records for a species are given, the date(s) of recovery are listed, followed in parenthesis by the location and number of birds found. Where there are more than four records for a species, the records have been summarized. Each month was divided into approximately three equal periods (from the first to the tenth, from the eleventh to the twentieth, and from the twenty-first to the end of the month). Total individuals for each species found during each of these periods are entered in order in parenthesis after each month of occurrence. This is followed by the total number of individuals of a species found during the 1971 and 1972 fall periods, and the fall totals for each tower in paren-

TABLE 1. *Birds recovered on 30 October 1970 at WECT TV tower*.

Species	Number	Species	Number
Common Flicker (Yellow-shafted)	2	Northern Waterthrush	1
Yellow-bellied Sapsucker	3	Common Yellowthroat	30
Brown Creeper	2	Yellow-breasted Chat	5
House Wren	5	American Redstart	10
Winter Wren	5	Eastern Meadowlark	5
Long-billed Marsh Wren	4	Red-winged Blackbird	2
Gray Catbird	9	Rusty Blackbird	1
Brown Thrasher	1	Blue Grosbeak	2
American Robin	1	Indigo Bunting	1
Hermit Thrush	6	Rufous-sided Towhee	8
Golden-crowned Kinglet	6	Savannah Sparrow	26
Ruby-crowned Kinglet	3	Grasshopper Sparrow	3
Yellow-throated Vireo	1	Henslow's Sparrow	4
Red-eyed Vireo	1	Seaside Sparrow	4
Black-and-white Warbler	1	Chipping Sparrow	1
Northern Parula	1	Field Sparrow	4
Yellow-rumped Warbler (Myrtle)	68	White-throated Sparrow	9
Pine Warbler	1	Swamp Sparrow	33
Palm Warbler	3	Song Sparrow	15
Ovenbird	3		

*An estimated 1000 birds were killed. Due to inclement weather only the above were identified and counted. Birds were killed on several dates prior to discovery.

thesis. Spring records and data from Table 1 (30 October 1970) are not included in the totals, but references to these are given for several species. Annotations are made where warranted.

All occurrences were compared with the extensive 11-year study conducted by H.L. Stoddard and R.A. Norris in Leon County, Florida, between 1955 and 1966; the 8-year continuation of that study (1966-1973) by R.L. Crawford; and with the unpublished bibliography of nocturnal mortality compiled in 1967 by William Buskirk. Individual reference to these two reports will not be cited, unless specific comparisons are made. Very little information has been published on the land birds of the southeastern coastal plain. Comments on abundance in this area are based on the authors' experience.

PIED-BILLED GREBE: 6 September 1972 (WWAY-1) and 17 October 1971 (WECT-1).

GREAT BLUE HERON: 19 October 1971 (WECT-1). No other instance of a Great Blue Heron hitting a tower was found in the literature.

BLACK-CROWNED NIGHT HERON: 20 October 1971 (WECT-1). No other instance of a Black-crowned Night Heron hitting a tower was found. Records for this species are uncommon away from the immediate coast.

CLAPPER RAIL: 23 September 1971 (WECT-1). This species is generally considered to be confined to salt and brackish marshes in coastal areas. Its occurrence approximately 42 miles inland was not expected. A Clapper Rail found at a Raleigh, North Carolina TV tower on 28 September 1965 (Browne and Post 1972) and one found on 11 September 1969 at a tower in Orange County, Florida (Taylor and Anderson 1973) were the only other tower kill records located.

VIRGINIA RAIL: 24 September 1971 (WECT-1). Records for this species inland in North Carolina are scarce.

SORA: 6 September 1972 (WECT-1), 23 September 1971 (WECT-3), 24 September 1971 (WECT-2), 2 October 1971 (WECT-1).

YELLOW-BILLED CUCKOO: 23 September 1971 (WECT-1).

COMMON FLICKER: 5 October 1971 (WWAY-1), 17 October 1971 (WWAY-1), 19 October 1972 (WECT-1). This species has been of infrequent occurrence in tower kills elsewhere in the southeastern United States.

YELLOW-BELLIED SAPSUCKER: October (2-9-3). Total 14 (WECT-13, WWAY-1).

GREAT CRESTED FLYCATCHER: 24 September 1971 (WECT-1). This species has rarely been found in autumn tower kills.

EASTERN PHOEBE: 19 October 1971 (WECT-1). This species has rarely been found in tower kills.

ACADIAN FLYCATCHER: 5 October 1971 (WWAY-2). A well decomposed bird was picked up on 29 October 1971 at WECT. A tentative identification placed the bird in this species.

TRAILL'S FLYCATCHER: 23 September 1971 (WECT-1). There are apparently no previous fall records of this species complex from southeastern North Carolina.

TREE SWALLOW: 23 September 1971 (WECT-1). This individual was well decomposed. This diurnal migrant has seldom been reported in tower kills.

BROWN CREEPER: Two on 30 October 1970 at WECT (Table 1). Brown Creepers have been of infrequent occurrence in tower kills in the southeastern United States.

HOUSE WREN: September (0-0-3), October (11-24-7), November (1-0-0). Total 46 (WECT-36, WWAY-10).

WINTER WREN: October (0-6-3). Total 9 (WECT).

LONG-BILLED MARSH WREN: September (0-0-13), October (5-11-0). Total 29 (WECT-22, WWAY-7). The fall migration of this species is generally along the coast. Occurrences inland are less frequent. Single birds found on 14 April and 22 May 1972 at WECT were the only spring records.

SHORT-BILLED MARSH WREN: 5 October 1971 (WWAY-5) and 19 October 1972 (WECT-1, WWAY-1). See comment on preceding species concerning migratory routes.

GRAY CATBIRD: September (0-0-18), October (57-84-5). Total 164 (WECT-122, WWAY-42). A single well decomposed bird was found on 5 March 1972 at WECT.

BROWN THRASHER: September (0-0-5), October (1-0-1). Total 7 (WECT).

AMERICAN ROBIN: 29 October 1971 (WECT-1) and 8 December 1972 (WECT-1). Also one at WECT on 30 October 1970 (Table 1).

WOOD THRUSH: September (0-0-3), October (11-2-0). Total 16 (WECT-15, WWAY-1).

HERMIT THRUSH: October (0-15-28). Total 43 (WECT-42, WWAY-1).

SWAINSON'S THRUSH: September (0-0-2), October (12-6-1). Total 21 (WECT-17, WWAY-4). A single bird found on 29 October 1971 at WECT was late for this species.

GRAY-CHEEKED THRUSH: September (0-0-2), October (12-5-2). Total 21 (WECT-13, WWAY-8). Generally this species is considered to be less common than the Swainson's Thrush in North Carolina. Thus, the occurrence of identical numbers of these two species was surprising. The two birds found at WECT on 29 October 1971 were late.

VEERY: September (4-0-33), October (6-0-0). Total 43 (WECT-37, WWAY-6). The majority of these birds (31) was found on 23 September 1971 at WECT.

GOLDEN-CROWNED KINGLET: October (0-29-53), November (1-0-0). Total 83 (WECT). Ruby-crowned Kinglets are generally considered to be more abundant than Golden-crowned Kinglets in eastern North Carolina. Therefore, the larger numbers of this species were surprising.

RUBY-CROWNED KINGLET: October (3-12-52), November (5-0-0). Total 72 (WECT-

68, WWAY-4). See account of preceding species. A single well decomposed bird was found on 5 March 1972 at WECT.

KINGLET SP.: October (0-4-13), November (0-1-0). Total 18 (WECT). These birds were partially eaten and/or decomposed to the point that species identification was impossible.

WHITE-EYED VIREO: September (0-0-2), October (3-2-0). Total 7 (WECT-6, WWAY-1). Numbers of this species were lower than expected. In a study in northwestern Florida, 469 were found over an 18-year period (Stoddard and Norris 1967, Crawford 1974). A single bird was found on 14 April 1972 at WECT.

YELLOW-THROATED VIREO: One bird at WECT on 30 October 1970 (Table 1). This individual was well decomposed when found.

SOLITARY VIREO: 19 October 1972 (WECT-1), 26 October 1972 (WECT-3), 29 October 1971 (WECT-1).

RED-EYED VIREO: September (0-0-48), October (74-26-1). Total 149 (WECT-78, WWAY-71). Seventy were found at WWAY on 5 October 1971. A single bird found on 29 October 1971 at WECT was late.

BLACK-AND-WHITE WARBLER: September (0-0-32), October (71-9-3). Total 115 (WECT-52, WWAY-63). All 63 of the birds found at WWAY were picked up on 5 October 1971.

SWAINSON'S WARBLER: 19 October 1971 (WWAY-1). This bird was quite late. The latest date in a similar study in northwestern Florida was 20 October (Crawford 1974).

WORM-EATING WARBLER: 6 September 1972 (WECT-1), 24 September 1971 (WECT-2), 2 October 1971 (WECT-1), 5 October 1971 (WWAY-2). Occurrence of this species in eastern North Carolina in the fall is poorly documented.

GOLDEN-WINGED WARBLER: 23 September 1971 (WECT-1). This species has rarely been found in eastern North Carolina during fall migration.

BLUE-WINGED WARBLER: 24 September 1971 (WECT-1). This species is also a rare transient in eastern North Carolina.

TENNESSEE WARBLER: 5 October 1971 (WWAY-1). Fall records for this species in southeastern North Carolina are rare.

NASHVILLE WARBLER: 24 September 1971 (WECT-1). This transient is also considered to be rare in southeastern North Carolina during fall migration.

NORTHERN PARULA: September (0-0-10), October (4-8-6), December (0-1-0). Total 29 (WECT-26), WWAY-3). Numbers of this species, which is a common summer resident and transient in eastern North Carolina, were lower than expected. A single well decomposed bird picked up on 20 December 1971 at WECT probably was killed in late November or early December, quite late for the species.

YELLOW WARBLER: 23 September 1971 (WECT-3), 5 October 1971 (WWAY-5).

MAGNOLIA WARBLER: September (0-0-4), October (15-3-0). Total 22 (WECT-9, WWAY-13). The 13 birds found at WWAY were picked up on 5 October 1971.

CAPE MAY WARBLER: September (0-0-8), October (26-6-13). Total 53 (WECT-29, WWAY-24). This transient species is found occasionally along the coast of southeastern North Carolina during the fall migration. The 13 birds found in late October [26 October 1972 (WECT-2), 29 October 1971 (WECT-10), 30 October 1971 (WECT-1)] indicate that the migration of this species continues later into the fall than expected.

BLACK-THROATED BLUE WARBLER: September (0-0-24), October (216-38-11). Total 289 (WECT-85, WWAY-204). This species is generally considered to be an uncommon fall transient along the southeastern coast of North Carolina, thus the 203 birds found in Brunswick County at the WWAY tower on 5 October 1971 represent an unusual record. The 11 birds killed in late October [26 October 1972 (WECT-2), 29 October 1971 (WECT-7), 30 October 1971 (WECT-2)] indicate that this species may occur regularly later in the fall than generally realized. Both subspecies (*Dendroica caerulescens caerulescens* and *D.c. cairnsi*) were found in the kills.

YELLOW-RUMPED WARBLER: October (0-57-155), November (0-1-1), December (1-3-0). Total 218 (WECT-210, WWAY-8). We found 125 at WECT on 29 October 1971. The only band recovery during the study was made by a tower employee at the WECT tower in late October 1970. He found a stunned Yellow-rumped Warbler that had been banded on 11 October 1970 near Elton, New York. The bird recovered and was released. The exact date of recovery could not be recalled.

BLACK-THROATED GREEN WARBLER: 19 October 1972 (WECT-1), 29 October 1971 (WECT-1). The bird found on 29 October 1971 was late.

BLACKBURNIAN WARBLER: 5 October 1971 (WECT-1, WWAY-3). This species is very uncommon along the coast of southeastern North Carolina during fall migration.

YELLOW-THROATED WARBLER: 23 September 1971 (WECT-1). Most individuals of this early migrating species probably had passed southward before our study began.

CHESTNUT-SIDED WARBLER: 24 September 1971 (WECT-1) and 5 October 1971 (WWAY-3). This species is uncommon along the coast during fall migration.

BAY-BREASTED WARBLER: 24 September 1971 (WECT-1) and 17 October 1971 (WECT-1). Few records of this species exist from southeastern North Carolina.

BLACKPOLL WARBLER: September (0-0-3), October (3-3-15). Total 24 (WECT-21, WWAY-3). Buskirk (1967) in his summary lists no fall kills from North Carolina. Stoddard and Norris (1967) and Crawford (1974) in their 18-year study had only two birds killed in fall in northwestern Florida, and Taylor (1973) found 10 individuals in a 4-year study in central Florida.

PINE WARBLER: October (2-5-4). Total 11. (WECT-9, WWAY-2).

PRAIRIE WARBLER: 6 August 1972 (WECT-1), 24 September 1971 (WECT-2), 5 October 1971 (WWAY-3). We were surprised to find so few individuals of a species that is a common transient and summer resident throughout eastern North Carolina.

PALM WARBLER: October (73-10-4). Total 87. (WECT-16, WWAY-71). We picked up 68 at WWAY on 5 October 1971.

OVENBIRD: September (0-0-54), October (192-16-6). Total 268 (WECT-109, WWAY-159). This species is a relatively common fall transient in eastern North Carolina. Of the 268 individuals killed, 159 were picked up on 5 October 1971 at WWAY. Six birds at WECT on 29 October 1971 were late. It was very surprising to find only one bird during the fall of 1972.

NORTHERN WATERTHRUSH: 23 September 1971 (WECT-10), 24 September 1971 (WECT-2), 5 October 1971 (WWAY-7). This species begins its migration early, and the bulk of its numbers probably had passed prior to the onset of field work.

KENTUCKY WARBLER: 23 September 1971 (WECT-1) and 5 October 1971 (WWAY-1). This secretive species is seldom found along the southeastern coast of North Carolina during fall migration.

CONNECTICUT WARBLER: 5 October 1971 (WWAY-1). This species is rare in southeastern North Carolina during fall migration.

COMMON YELLOWTHROAT: September (0-0-203), October (188-142-24), November (1-0-0). Total 558 (WECT-386, WWAY-172). This was the most abundant and regular species in the tower kills, comprising 18.2% of the specimens.

YELLOW-BREASTED CHAT: 23 September 1971 (WECT-2), 24 September 1971 (WECT-3), 5 October 1971 (WWAY-4). Five were found at WECT on 30 October 1970 (Table 1).

HOODED WARBLER: August (1-0-0), September (0-0-2), October (2-2-0). A freshly killed bird found on 17 October 1971 at WECT was late. Considering that this is a common transient and summer resident in eastern North Carolina, few birds were killed. A single spring record was one bird found on 14 April 1972 at WECT.

AMERICAN REDSTART: September (2-0-58), October (71-9-1). Total 141 (WECT-84, WWAY-57). The bird found on 31 October 1971 at WECT was quite late. We picked up 56 at WWAY on 5 October 1971.

BOBOLINK: September (1-0-21), October (3-0-0). Total 25 (WECT-23, WWAY-2).

EASTERN MEADOWLARK: 18 October 1971 (WECT-1), 19 October 1972 (WECT-1), 29 October 1971 (WECT-1). Five were found at WECT on 30 October 1970 (Table 1).

RED-WINGED BLACKBIRD: 17 October 1971 (WECT-2), 18 October 1971 (WECT-3), 29 October 1971 (WECT-2). Two were found at WECT on 30 October 1970 (Table 1).

NORTHERN ORIOLE: 21 September 1972 (WECT-1), 23 September 1971 (WECT-1), 24 September 1971 (WECT-3), 5 October 1971 (WWAY-1).

RUSTY BLACKBIRD: One was found at WECT on 30 October 1970 (Table 1).

SCARLET TANAGER: 5 October 1971 (WWAY-2). This species is rarely seen along the southeastern coast of North Carolina during fall migration.

SUMMER TANAGER: 23 September 1971 (WECT-1). This species is a common summer resident and transient in eastern North Carolina. Its early migration may have resulted in most birds passing prior to the onset of field work. The single bird found was well decomposed.

CARDINAL: 19 October 1971 (WECT-1). The Cardinal is an abundant resident species throughout eastern North Carolina. The magnitude of its fall migration is generally unknown.

ROSE-BREASTED GROSBEAK: 23 September 1971 (WECT-1), 5 October 1971 (WECT-1). This species is generally considered an uncommon fall transient in eastern North Carolina.

BLUE GROSBEAK: Two were found at WECT on 30 October 1970 (Table 1). This species is a relatively common summer resident in the farmlands of eastern North Carolina. Although the birds found on 30 October probably were killed several days earlier, the record is still somewhat late.

INDIGO BUNTING: September (0-0-1), October (4-12-2). Total 19 (WECT-15, WWAY-4). Two birds found on 29 October 1971 at WECT were late.

DICKCISSEL: 23 September 1971 (WECT-1) and 5 October 1971 (WWAY-1). Records of this western species in eastern North Carolina are sporadic, usually occurring in spring or winter.

RUFOUS-SIDED TOWHEE: October (0-7-3). Total 10 (WECT-9, WWAY-1).

SAVANNAH SPARROW: September (0-0-2), October (1-22-13), November (0-1-0), December (1-1-0). Total 41 (WECT-40, WWAY-1).

GRASSHOPPER SPARROW: September (0-0-1), October (1-3-2). Total 7 (WECT-6, WWAY-1). The status of this sparrow in southeastern North Carolina is generally unknown. It appears to be very uncommon during fall migration. Three additional Grasshopper Sparrows were found on 30 October 1970 at WECT (Table 1).

HENSLOW'S SPARROW: 28 November 1971 (WECT-1). Four were found dead at WECT on 30 October 1970 (Table 1). In addition to the dead birds, two live and apparently uninjured Henslow's Sparrows were seen at WECT on 19 October 1972. The status of this species in southeastern North Carolina is poorly understood, but it is generally considered a very uncommon and localized winter resident.

SHARP-TAILED SPARROW: October (1-5-2). Total 8 (WECT-7, WWAY-1). Since this species is very rare in inland North Carolina, it was surprising to find it in our study. Stoddard and Norris (1967) and Crawford (1974), in an 18-year study of a tower in northwestern Florida, listed 9 fall fatalities, all in early to mid-October.

SEASIDE SPARROW: October (0-13-2). Total 15 (WECT-12, WWAY-3). Four were found dead at WECT on 30 October 1970 (Table 1). A single individual with slightly impaired flight was seen at WECT on 19 October 1971. The only published record of a Seaside Sparrow hitting an obstruction at night is one found dead at a Raleigh, N.C., TV tower on 5 November 1968 (Post and Browne 1971). This also represents the only known inland occurrence for North Carolina. The presence of the Seaside Sparrow for three consecutive years at WECT strongly suggests an inland migratory pathway.

DARK-EYED JUNCO: 8 December 1972 (WECT-1). This species has been infrequent in tower kills in the southeastern United States.

CHIPPING SPARROW: 29 October 1971 (WECT-1). One was found at WECT on 30 October 1970 (Table 1).

FIELD SPARROW: 29 October 1971 (WECT-2). Also four were found at WECT on 30 October 1970 (Table 1).

WHITE-THROATED SPARROW: October (0-6-3). Total 9 (WECT).

FOX SPARROW: 20 December 1971 (WECT-1). This bird was well decomposed when found. This is a late fall migrant in southeastern North Carolina, which accounts for its scarcity in the kills.

SWAMP SPARROW: October (0-49-32). Total 81 (WECT-80, WWAY-1). This is one of the most common sparrows in southeastern North Carolina during the winter and migrations and was the most common sparrow in the kills.

SONG SPARROW: October (0-10-9). Total 19 (WECT).

ACKNOWLEDGEMENTS

The management and employees of the WECT and WWAY television stations were very helpful throughout the study. Cecil Phelps of WECT provided information on previous kills at that tower and on the only band recovery during the study. The Biology Department at the University of North Carolina at Wilmington provided laboratory space. During the fall and winter of 1972, The Foundation of the University of North Carolina at Wilmington provided travel expenses for the senior author. The Multiple Abilities Program at the University of North Carolina at Wilmington provided financial support for the senior author from the fall of 1972 through the spring 1973.

SUMMARY

Discovery of a major kill in October 1970 led to regular checks of two TV towers in southeastern North Carolina during the fall migrations of 1971 and 1972. The WECT TV tower is near White Lake in Bladen County and the WWAY TV tower is near Boiling Spring Lakes in Brunswick County. Several large kills occurred in 1971, and 2,683 individuals of 83 species were found. Only 387 individuals of 45 species were found during the fall of 1972. Weather conditions favorable for large kills were prevalent during the fall of 1971, but were infrequent during the fall of 1972.

Several unusual species for southeastern North Carolina were found. The 203 Black-throated Blue Warblers found at WWAY on 5 October 1971 were very surprising. Of special interest was the occurrence of small numbers of Seaside Sparrows 42 miles inland at WECT during three consecutive fall migrations (1970-1972). A Clapper Rail and several Sharp-tailed Sparrows also were found at WECT.

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CBC Roundtable

... with Louis C. Fink

New Policy for Use of Scientific Names in Chat

Beginning with the present issue of *Chat,* scientific names of birds no longer will be used in major papers involving a long list of species presented in A.O.U. *Check-list* order and conforming to the common names appearing in the current edition of the *Check-list* (1957) and its published supplement (*Auk* 90:411-419) with corrections (*Auk* 90:887). The editors believe this policy will offer substantial savings on the cost of printing useful regional bird lists without significantly changing the over-all quality of the journal.

Authors should continue to supply scientific names for plants and animals (1) in formal habitat descriptions, (2) in General Field Notes or major papers involving only a few avian species, (3) in all discussions of forms below the species level, and (4) in any context where the common name might be inadequate for insuring accurate identification.

A Birder's Guide to Georgia

This 32-page, 6″ x 9″ book has been published by the Georgia Ornithological Society. The price is not quoted, but the book may be ordered from G.O.S., P.O. Box 362, Atlanta, Ga. 30301. Daniel W. Hans edited the work, which includes contributions from good birders all over the State. Each area meets the criteria of being open to the public and accessible to persons of average physical ability. Directions include the downtown parks of Atlanta, the Federal Wildlife Refuges, choice spots in the mountains, Okefenokee, and many more. A feature is a list of special birds like the Limpkin, Budgerigar, Bachman's Sparrow, and Buff-breasted Sandpiper, with directions for finding them.

Unusual Wood Duck Nesting Location

On 6 May 1975 Mrs. M.D. Rakes observed six young Wood Ducks leaving their nest from a black oak tree. The nest hole was in a rotted portion of the tree trunk where a limb had been removed. The height of the hole was approximately 20 feet from the ground.

The tree is in the Rakes' front yard in a densely populated residential district of Eden, N.C. (Rockingham County). The nearest source of water is the Dan River, which is 1 1/2 miles (straight line distance) from the nest site. If the straight line path was used by the ducks, they would have had to cross eight city streets, two main highways, and a railroad track.

Why a Wood Duck hen would choose this location is open to speculation. The best guess is that there is probably a serious shortage of suitable nest sites in this area.—EDWARD E. BURROUGHS, 921 Seymour Court, Eden, N.C. 27288.

[Ed.'s Note: This is an interesting trait of Wood Ducks and suggests that householders might erect nesting boxes even if water is not near. Herbert K. Job observed the trait 40 years ago. Writing in *Birds of America* (Garden City Publishing Co., 1936), Mr. Job said, "The regular nesting site is in a hollow tree, preferably in the woods, and it is often quite a distance back from water." Apparently, the young have no trouble flopping out of the nest and following Mother to the nearest stream.]

Request for Information: Carolina Junco

Colored plastic bands have been used on Dark-eyed (Carolina) Juncos in the Grandfather Mountain area of Avery County, N.C., during the summer of 1975. The birds have been banded near State Route 105, north of Linville.

Eight colors have been used, including Red, White, Royal Blue, Sky Blue, Yellow, Dark Green, Lime Green, and Black.

If any of these birds are seen, the observer is asked to record:

(1) Date
(2) Place
(3) Any notable behavior of the bird in relation to others it may be with, and whether with banded birds.
(4) Combination of color bands, reading top to bottom, and left to right as the bird faces the observer: i.e. Right leg, Red over (Silver) F & W band. Left leg, Royal blue over yellow.

Details should be sent to: Margery Plymire, Box 306, Linville, N.C. 28646.

Camping Programs for Adults

Two organizations long noted for outstanding summer camping programs for young people now offer activities for families and groups of adults. Educational and recreational opportunities range from tennis, horseback riding, and the study of birds, wild flowers, or nature photography to whitewater canoeing and year-round backpacking trips. For free brochures write Frank T. Schell, Director, Mondamin Wilderness Adventures, P.O. Box 8, Tuxedo, N.C. 28784, and John Trott, Director, Burgundy Center for Wildlife Studies, 3700 Burgundy Road, Alexandria, Virginia 22303.

600 Club

600 Club direction has been assumed by Terry S. Moore, Apt. 10-F, 1185 Collier Road N.W., Atlanta, Ga. 30318. The annual voluntary contribution is five dollars for one person, seven dollars for husband and wife. The first Earle R. Greene Memorial Plaque was awarded to Mrs. Harriett DiGioia of Dalton, Ga.

Edwin I. Stearns (with 657 species) appears to be the only representative from the Carolinas to make the 600 list.

Our Inadequate Language

This reporter has made his living for years by using words, but I now find the language insufficient to describe my latest field trip, and my companion, Herman. You see, "companion" is an inadequate word: Herman brought enthusiasm to the walk; he raced abroad to scare up difficult sparrows; he ran ahead and then came back every few minutes to see if I was all right. Herman is a dog (but so much more than the word expresses) of uncertain ancestry. "Uncertain," perhaps; mixed certainly and Herman couldn't care less.

He said nothing for the 5 hours we were in the field, but his grin told how much he enjoyed bird-watching. "Grin" is not the right word for the expression of joy on Herman's face. His whole body radiated pleasure, and I can't think of a term for that.

Herman was brought along by a man you would like to call his master, but that was not the relationship. It was more of a partnership, and I can't say who gave the orders or who had the most fun. The man drove the car, but Herman was smarter: he jumped in the trunk each time we moved, and slept until the next stop. Because Herman covered so much more territory as he ran, I'm pretty sure he had a longer list for the day than the two of us. We used our eyes and our ears to identify birds; Herman also used his nose and smelled all sorts

(Continued on page 16)

General Field Notes

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The Black-legged Kittiwake in the Carolinas

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12 October 1974

Very little is known about the distribution of the Black-legged Kittiwake (*Rissa tridactyla*) along the coast of the Carolinas. The winter range of the species according to the American Ornithologists' Union (1957) is "... south to southern New Jersey (Atlantic City), and the Bermudas, rarely to eastern Florida (Jupiter)." Watson (1966) states that the kittiwake is a migrant past Bermuda from November to March, is a vagrant along the east coast of Florida from January to March, and migrates south to the Tropic of Cancer. A study of recent records indicates, however, that this bird may occur along the coast of the Carolinas in fair numbers.

While there are no published records for South Carolina, there have been 17 sightings in North Carolina since 1940. The first sighting by R.H. Pough (1940) on 5 February 1940 off Cape Hatteras was erroneously recorded as a specimen by Pearson, et al. (1959). The species was not recorded again until 27 December 1952 when P.B. Street (1953) saw two or probably three about 35 miles off Kitty Hawk and again on 3 January 1953 when Street saw four more kittiwakes 21 miles E of Cape Hatteras. The 12-year lull in sightings between 1940 and 1952 probably represents a paucity of observers rather than kittiwakes as noted by Jones (1967) with the Razorbill (*Alca torda*) during this same period of time. Four years later F.C. Richardson (1957) and others saw a single immature kittiwake on 2 February 1957 at Oregon Inlet. On 1 February 1959 three birds (two immatures, one adult) were seen on the beach at Cape Hatteras by J.E. Ames (1959) and five others. These birds were oiled but able to fly. Four immature kittiwakes were observed on 14 February 1959 on the beach at Cape Hatteras by P.W. Sykes (1959), and on 29 March 1959 two immatures were found on the south shore of Cape Hatteras by T.L. Quay, P.W. Sykes, and J.F. Parnell. Again the next day, 30 March 1959, a single immature bird was seen (T.L. Quay, pers. com.).

The species was not recorded again until 1967 but has been seen almost annually since then. On 19 December 1967 an immature Black-legged Kittiwake was collected about 30 miles off the mouth of the Cape Fear River and turned over to J.F. Parnell. The bird was placed in the collection of the North Carolina State Museum of Natural History (NCSM-4018) and constitutes the first specimen taken in North Carolina. On 10 November 1968, at least five immature kittiwakes were observed from a charter fishing boat off Wrightsville Beach. The first two were sighted 6 miles offshore, one was 8 miles off, one was 10 miles off, and the fartherest one was 13 to 14 miles offshore. Two were observed on the return trip. The birds were studied at close range by M.M. Browne, G.S. Grant, R.J. Hader, W.

Post Jr., and eight others (Parnell 1969a). The winds were from the northeast at 20 to 30 knots. Following a continuation of the northeast winds on 12 November 1968, J.F. Parnell (1969a) observed single kittiwakes at five different points between 10 to 15 miles off Smith Island and the mouth of the Cape Fear River. On 13 March 1969 E. Pond (Parnell 1969b) found a Black-legged Kittiwake dead on the beach at Cape Lookout. A total of 31 were recorded by many observers on the Bodie-Pea Island Christmas Bird Count on 30 December 1971 and 2 were found on the Wilmington Christmas Bird Count on 18 December 1971 (Teulings 1972). Two kittiwakes were found by R.L. Ake, D. Sonneborn, and H. LeGrand on the Bodie-Pea Island Christmas Bird Count on 30 December 1972 (Sykes 1973) and 43 (1 adult, 42 immatures) were recorded there by many observers on the 31 December 1973 count (Potter 1974). A phenomenal 85 Black-legged Kittiwakes were seen resting in the surf off Coquina Beach, Dare County, on 16 February 1974 by R.A. Rowlett and B. Edsburg (Teulings 1974).

The recent Bodie-Pea Island sightings were enhanced by more thorough ocean coverage facilitated by access to a U.S. Coast Guard vessel on count day. Adequate winter pelagic coverage probably would reveal that the Black-legged Kittiwake is much more common immediately offshore than suspected. Recently, R.A. Rowlett (1973) has found the Black-legged Kittiwake to be the most abundant gull a few miles off the Maryland coast. His observations are the result of a series of winter pelagic trips aboard cod fishing headboats. Rowlett recorded over 200 on 3 February 1972, and about 500 were found off Maryland on 2 and 3 February 1974 (Scott and Cutler 1974). Unfortunately, cod fishing is not economically feasible south of Maryland and boats for hire in winter are somewhat scarce and unpredictable due to inclement weather, low demand, and preventive maintenance scheduling. The recent North Carolina sightings indicate that kittiwakes are there, and efforts should be directed toward more winter pelagic birding trips in order to gain a better understanding of our coastal avifauna. Efforts to add the Black-legged Kittiwake to the South Carolina state bird list should be initiated as it undoubtedly occurs offshore there during winter.

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[Dept. Ed.—A second North Carolina Black-legged Kittiwake was collected by James F. Parnell and Frank Chapman on 12 December 1975 about 2 miles E of Wrightsville Beach. The adult bird was taken from a flock of about 12 adults and is now in the collection of the University of North Carolina at Wilmington.]

Saw-whet Owl Records From the Southern Great Balsam Mountains of North Carolina

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18 June 1975

Peake (*Chat* 23:110-111, 1965) and Simpson (*Chat* 32:83-89, 1968; 36:39-47, 1972; 38:94, 1974) have reported the Saw-whet Owl (*Aegolius acadicus*) as a spring and summer resident in the higher elevations of the southern Great Balsam Mountains of North Carolina. The following observations were made during surveys of the range in May 1975.

At 21:25 on 27 May 1975, Simpson listened for 10 minutes to the calling of a single owl at Spruce Ridge (1700 m). At Beartrail Ridge (1800 m) on the NE slope of Reinhart Knob, Simpson heard two owls calling loudly at 21:45 on 27 May; and on 30 May, Ruiz and Simpson noted a single owl calling from the same site at 21:40 At Sweetwater Spring (1550 m) just N of Haywood Gap, a single owl was heard by Simpson at 22:00 on 27 May and again by Ruiz and Simpson on 30 May. A single owl was heard by Simpson at Devil's Courthouse (1720 m) at 22:20 on 27 May, while Ruiz and Simpson located a faintly calling owl along Fork Ridge (1480 m) just N of Mt. Hardy at 22:45 on 30 May.

The active calling sites found during this survey have been described previously by Simpson (*Chat* 36:39-47, 1972; 38:94, 1974). These records provide additional data indicating the spring resident status of the Saw-whet Owl in the Great Balsams, and a comparison with previous surveys suggests a fairly stable population density over the past decade. Evidence supporting breeding has been presented by Peake (*Chat* 23:110-111, 1965) and by Simpson and Range (*Wilson Bulletin* 86:173-174, 1974), although no nests have yet been found.

Caspian Tern Nesting in North Carolina

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1 August 1975

On 25 June 1972 we discovered two Caspian Tern (*Hydroprogne caspia*) nests at Oregon Inlet on North Carolina's Outer Banks. These appear to be the first nests of this tern reported from North Carolina, although the species has been reported nesting both to the north at Cobb's Island, Virginia (A.O.U. *Check-list,* 1957) and to the south at Cape Romain, S.C. (McDaniel and Beckett, *Chat* 35:39-41, 1971).

Oregon Inlet was surveyed again in 1973 and a single nest was located. In 1974, four nests were present at Oregon Inlet, and one nest was found 50 miles to the south at Hatteras Inlet. See Table 1 for details.

All nests were placed on the bare or nearly bare sandy domes of dredge spoil islands. Nests were scrapes lined with small shell fragments, and were thus easily separable from Royal Tern (*Thalasseus maximus*) nests which never had shell linings.

The Caspian Tern nests were associated with colonies of Black Skimmers (*Rynchops niger*), Common Terns (*Sterna hirundo*), or Royal Terns. They were usually on the fringes of other colonies and were never found completely isolated from other colonial ground nesting birds. In both 1974 and 1975 there were clusters of three nests at Oregon Inlet indicating the beginnings of small colonies. In both cases large colonies of Royal Terns were nearby.

These findings indicate that the Caspian Tern is establishing itself as a breeding

TABLE 1. *North Carolina Caspian Tern Nesting Data.*

Year	Date	Nests	Nest Contents	Location
1972	27 June	2	1 egg, 2 eggs	Oregon Inlet
1973	1 June	1	1 egg	Oregon Inlet
1974	12 June	1	1 chick	Hatteras Inlet
	13 June	4	1 chick, 2 chicks, 1 egg, 1 egg	Oregon Inlet
1975	5 June	4	1 chick, 1 chick, 2 eggs, 2 eggs	Oregon Inlet

species in coastal North Carolina. While this species is not abundant as a nester on the East Coast and appears to be erratic in its breeding distribution, it may become a regular component of our nesting bird fauna.

These observations were made while conducting research on community succession on dredge islands supported by the NOAA Office of Sea Grant, Department of Commerce, Grants No. 2-35178 and 04-3-158-40.

Notes and Comments on the Blue-winged and Golden-winged Warblers in Southwestern North Carolina in Summer

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11 July 1975

On 20 June 1974 I found five singing Blue-winged Warblers (*Vermivora pinus*) in the western half of Cherokee County, N.C., in the extreme southwestern corner of the state (*Chat* 39:58). In 1975 I made three more trips to Cherokee and Clay Counties to study the avifauna of this region and to search for additional Blue-wingeds. I was unable to find any Blue-winged Warblers east of Murphy despite considerable search; however, on 23 June I found the species at three locations west of that town, two of these near Suit and one near Unaka. Surprisingly, the song period of the species had ended, as I detected the birds only by their constant calls, which I render as a buzzy *bzee*. At each location I saw about three birds, with one adult male and two adult female or immature-plumaged birds present. I drew the birds into view with my imitation of the *b-e-e-e b-z-z-z* song, and the birds were very excited upon hearing the song. Although I am not positive I saw any juveniles, breeding is strongly indicated by the fact that I observed two female-plumaged birds at each location and saw one such bird carrying food into grasses on the ground.

In addition to the Blue-winged Warblers, I found Golden-winged Warblers (*V. chrysoptera*) at several localities in the two counties. On 13 June single singing birds were 2 miles N of Hayesville, 1 mile E of Marble, 3 miles SE of Andrews, and 6 miles SE of Andrews. On 23 June a singing male was found along NC 294 about 2 miles E of the Tennessee state line. All five birds were first noted by song, and three were singing an alternate to the usual song, a variation consisting of about seven rapid buzzes followed by a higher terminal note.

A discussion of the Blue-winged and Golden-winged Warblers in the same area must mention the possibility of hybridization between these two closely related species. I am not aware of any published records of hybrids (Brewster's and Lawrence's) or mixed matings in North Carolina during the summer, nor have I seen any evidence of hybridization between the two species in the mountains of the state. My summer observations total about 12 Blue-winged Warblers, all in Cherokee County, and over 30 Golden-wingeds, from Watauga County southwest to Cherokee County and especially in Jackson and Macon Counties. My observations also indicate that although the two species might breed in the same locality in the state, there are fairly definite differences in elevation and habitat for breeding. I have found the Blue-winged only between 1650 and 1800 feet. Although my Golden-winged records for Cherokee and Clay Counties have been between 1650 and 3000 feet, over most of North Carolina the species is scarce below 2000 feet, reaching peak abundance above 3000 feet. The Blue-winged prefers somewhat earlier stages of brushy field habitat than does the Golden-winged, and the latter species is usually found on much steeper slopes than those where I've seen the Blue-winged. The Blue-winged prefers overgrown fields with shrubs and saplings in the 5 to 12 foot high range, whereas the Golden-winged likes fields grown up with saplings in the 8 to 30 foot range, especially where the saplings are black locust (*Robinia pseudo-acacia*).

In summary, my observations and published records show no evidence of hybridization between the Blue-winged and Golden-winged Warblers in the North Carolina mountains in summer, unlike the interbreeding populations from West Virginia and Maryland northward. Birders should try to observe singing warblers of these species to determine whether the birds are purebreeds, hybrids, or in some intermediate plumage. Any records of hybrids and birds in intermediate plumages should be published, especially if they are of nesting season birds.

CBC ROUNDTABLE

(Continued from page 11)

of things which we missed. We picked up a few bones and tried to identify the bird; Herman took one bite and was satisfied.

Herman ought to be a member of the Carolina Bird Club, but again the word fails. Herman isn't a "member" of anything; he's complete unto himself. It was great to know you, Herman.

Birds Can Be Fun in Australia

Friends in Sydney have shared with me a nature column by Vincent Serventy; reading makes me want to go "down under." In the South Perth Zoo, wild wagtails were introduced into a cage of captive wagtails. Confrontation took place, with the birds expanding their white "eyebrows" as a threat gesture. People in Auckland picked up a great petrel (wing spread over 6 feet) which had apparently flown from the Falkland Islands off South America and was exhausted. The pied currawong rolls on its back and plays with a ball like a juggler. The rock warbler is not found far from Sydney, but nests commonly around homes, or even in them; it is a ground-feeder. There is a nightjar (nighthawk) which looks like a small owl; yes, it's called the owlet-nightjar.

Well, I'll never add these to my list, but it's fun to read about them. The friend who sends the newspaper clippings says that large parrots are eating all the seed in their feeders. Pity.

Peregrine Falcons to be Checked

John Horn (of the Department of Botany at Duke) has sent a report about Peregrine Falcons bred in captivity by Professor Tom Cade at Cornell University. Sixteen have been released and several have been seen on their way south. Each bird has a blue band on one leg, and some have six-inch wire radio antennaes trailing from their tails. If you see one, notify Dr. Tom Cade at 607-256-5056.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514

(All Dates 1975)

COMMON LOON: A late lingerer was found at Roanoke Rapids Lake near Roanoke Rapids, N.C., on 23 June by Merrill Lynch, and another at Oregon Inlet on the North Carolina Outer Banks on 15 July by Morgan Jones.

RED-THROATED LOON: A summer straggler was seen off the ferry dock at Hatteras Island, N.C., on 28 June by Mike Browne.

HORNED GREBE: One was observed as late as 18 June at Beaufort Inlet near Morehead City, N.C., by T.L. Quay et al.

CORY'S SHEARWATER: Two were seen in South Carolina coastal waters off Myrtle Beach on 18 July by Royce Hough.

GREATER SHEARWATER: At least 12 were seen off the harbor jetties at Charleston, S.C., on 3 July by Bill Elliott and Perry Nugent.

SOOTY SHEARWATER: An individual, obviously sick or exhausted, was found on the beach at Cape Lookout, N.C., on 21 June by Robert Hader. Offshore, up to 10 were sighted outside Charleston Harbor on 24 July by P.J. Crutchfield and party.

AUDUBON'S SHEARWATER: One was observed at Surf City, Pender County, N.C., on 4 July by Merrill Lynch.

WILSON'S STORM-PETREL: Sixty were seen in Gulf Stream waters off Cape Hatteras, N.C., on 5 July by Richard Rowlett. Inshore sightings of single birds were noted at Beaufort Inlet near Morehead City, N.C., on 1 July by David Lee and 15 July by John Fussell, and another at Surf City, N.C., on 4 July by Merrill Lynch.

WHITE-TAILED TROPICBIRD: One was sighted at sea about 40 miles SE of Charleston, S.C., on 14 June by T.A. Beckett IV and party; and another was seen some 45 miles SE of Morehead City, N.C., on 18 July, observed by Allyn Powell and reported by John Fussell.

MAGNIFICENT FRIGATEBIRD: One was observed near shore off Pawleys Island, S.C., on 4 July by R.A. DesPortes. Along the coast farther north at Kitty Hawk, N.C., another was seen on 14 July by Morgan Jones.

DOUBLE-CRESTED CORMORANT: Single summer vagrants were found on 29 June at Huntington Beach State Park near Murrells Inlet, S.C., by F.M. Probst, and inland at Roanoke Rapids Lake, Northampton County, N.C., on 27 July by Merrill Lynch.

BLACK-CROWNED NIGHT HERON: An immature was seen at Townville, S.C., on 12 July by Harry LeGrand and Sidney Gauthreaux, a first summer record for that inland area.

YELLOW-CROWNED NIGHT HERON: Locally rare inland summer occurrences were reported from Townville, S.C., where an immature bird was seen on 12 July by Sidney Gauthreaux and Harry LeGrand, and from Winston-Salem, N.C., where two immatures were present at Reynolda Park in late July and early August, observed by Fran Baldwin, Charles Frost, and Ramona Snavely.

WOOD STORK: Small flocks were present in the coastal area of the Carolinas this summer with the northernmost occurrence noted at Sunset Beach, N.C., where twelve were seen on 15 July by Royce Hough. Inland, one was seen in Kershaw County, S.C., near Boykin on 21 June by Sidney Gauthreaux.

WHITE IBIS: In late June and July wandering immatures turned up at several inland locations. One was observed at Clemson, S.C., on 30 June by Larry Luckett; another near Roanoke Rapids, N.C., on 13 July by Merrill Lynch; and six at Southern Pines, N.C., on 14 July by Jay Carter. The latter two sightings were first local records.

FULVOUS TREE DUCK: One was seen at the USDA Vegetable Research Farm near Charleston, S.C., on 11 July by Perry Nugent.

BLACK DUCK: Ten were surprisingly early fall visitors at Greenview Farm near Raleigh, N.C., on 19 July, observed by Mike Browne. Elsewhere 25 were seen at Roanoke Rapids Lake near Vultare, N.C., on 27 July by Merrill Lynch.

GADWALL: A small flock of four females, presumably early transients, were seen on a farm pond in Nash County, N.C., on 27 July by Louis Fink.

GREEN-WINGED TEAL: In the Raleigh, N.C., area one was seen at Lake Raleigh on 7 July by Clyde Smith and four at Greenview Farm on 19 July by Mike Browne.

RUDDY DUCK: Two were observed at New River Inlet near Topsail Beach, N.C., on 23 July by Steve Plantania and Will Thompson.

BLACK SCOTER: Eight were reported by Louise Lacoss to have lingered through June at Hilton Head Island, S.C. Other summer stragglers were seen in the Cape Fear River near Wilmington, N.C., in mid-July by T.L. Quay and James Parnell; and at least five were still present in the Morehead City, N.C., area on 29 July, fide John Fussell.

SWALLOW-TAILED KITE: One was sighted at Pea Island N.W.R. on North Carolina's Outer Banks on 24 May by Alan Gallagher.

MISSISSIPPI KITE: One was seen in North Carolina on the Pee Dee River in Anson County on 12 July by Stanley Alford and Robin Carter. Twenty-one were seen soaring above Interstate 20 east of Columbia, S.C., on 4 August by Vernon Pond and Paul McKenzie.

SHARP-SHINNED HAWK: Individuals were recorded on 22 June at Lake Brandt near Greensboro, N.C., by Robin Carter and 29 July near Nelson in Durham County, N.C., by Robert Teulings. No reports of nesting were received.

COOPER'S HAWK: A pair was reported by Ted Beckett to have successfully fledged two young at Magnolia Gardens near Charleston, S.C., this summer. This was the only nesting record noted.

BALD EAGLE: Ted Beckett reported three active nest sites in the vicinity of Charleston, S.C., during the 1975 breeding season. No other eagle nestings were reported from the Carolinas, although immature birds were seen during the summer period at North Litchfield Beach, Wilmington, and Morehead City by various observers. An inland sighting of an immature was recorded at Lake Hartwell near Clemson, S.C., on 14 July by Gene Hayes; and single adults were seen at Carolina Sandhills N.W.R. in Chesterfield County, S.C., on 10 June by Paul McKenzie and at Tuckertown Lake in Davidson County, N.C., on 3 July by Michael Massey.

MARSH HAWK: A summer sighting of a single bird was noted at Pea Island N.W.R. on 30 July by N.F. Williamson.

OSPREY: Two were seen at Belews Creek Lake NW of Winston-Salem on 8 June by Jerry Shiffert. Another was seen at Roanoke Rapids Lake on 27 July by Merrill Lynch, and a pair was reported by Wendell Smith to have summered at Kerr Scott Reservoir near North Wilkesboro, N.C. No definite indications of nesting have so far been observed at these large piedmont reservoirs.

AMERICAN KESTREL: Individuals were observed in mid-June near Pendleton, S.C., by Harry LeGrand and in early July in the Fort Bragg Military Reservation and at Pinebluff, N.C., by Jay Carter. Elsewhere, one was seen on 27 July in Halifax County, N.C., near Aurelian Springs by Merrill Lynch.

BLACK RAIL: One was seen at Johns Island, Charleston, S.C., on 23 July by Chris and Perry Nugent.

PURPLE GALLINULE: One wandered as far northward as Bells Island, Currituck County, N.C., where it was seen on 31 May by Gisella Grimm and Floy Burford.

COMMON GALLINULE: One was seen at a sewage pond near Pendleton, S.C., on 10 May by Harry LeGrand, Sidney Gauthreaux et al, and another was seen near Townville, S.C., on 6 July by Harry LeGrand. Both are unusual records for that interior location.

SEMIPALMATED PLOVER: An inland visitor was seen at Greenview Farm near Raleigh, N.C., on 4 May by Ken and David Knapp; and another was seen at Winston-Salem on 30 July, reported by Ramona Snavely.

BLACK-BELLIED PLOVER: Two were found inland at Wildwood Lake, Caswell County, N.C., on 15 May by Plumer Wiseman.

AMERICAN WOODCOCK: An adult with young was seen on 16 May in Orange County, N.C., near Chapel Hill by Margaret Wagner.

COMMON SNIPE: At least 60 were counted at Greenview Farm near Raleigh, N.C., on 6 April by Robert Hader.

LONG-BILLED CURLEW: Two early fall migrants were seen in the Charleston, S.C., area on 21 July by Dennis Forsythe and party. Another was seen on 9 August at Bird Shoal near Morehead City, N.C., by John Fussell.

UPLAND SANDPIPER: One was seen at Clemson, S.C., on 18 and 19 April and another there on 28 April by Harry LeGrand. Two were also found at Townville, S.C., on 8 May by Sidney Gauthreaux and Frank Moore.

GREATER YELLOWLEGS: One was an unusual find in the Asheville, N.C., area at Kenilworth Lake on 10 May by Chris Rustay. An inland visitor was also present at the Winston-Salem, N.C., city sewage treatment ponds 6-8 June, fide Ramona Snavely.

LESSER YELLOWLEGS: One was seen on 16 and 17 July and two on 26 July at the Winston-Salem, N.C., sewage treatment ponds, reported by Ramona Snavely.

PECTORAL SANDPIPER: A good inland count of 30 was recorded at Winston-Salem, N.C., on 3 April by Charles Frost and up to 12 were present there 26-30 July, observed by Ramona Snavely et al. Elsewhere in the piedmont, one was seen near Pendleton, S.C., on 12 July by Harry LeGrand.

WHITE-RUMPED SANDPIPER: One was an unusual spring visitor on 15 May at Clemson, S.C., seen by Harry LeGrand, Sidney Gauthreaux, and Frank Moore. At the Winston-Salem, N.C., sewage treatment ponds, five were found on 21 May and six on 22 May by Fran Baldwin, Charles Frost, James Orgain, and Ramona Snavely. Four more were seen there on 16 June as well as a single bird on 7 July by the same observers.

LEAST SANDPIPER: A good inland count of 25 was recorded at Wildwood Lake in Caswell County, N.C., on 18 May by Plumer Wiseman, and one was seen near Townville, S.C., on 6 July by Harry LeGrand. At Winston-Salem, N.C., up to 12 were seen at the city's sewage treatment ponds during July as reported by Ramona Snavely.

DUNLIN: Twelve were recorded inland at Winston-Salem, N.C., on 9 May by Fran Baldwin et al., and another at Raleigh, N.C., on 10 May by Clyde Smith and Chris Marsh.

SEMIPALMATED SANDPIPER: Two were seen on 6 June and one on 30 July at the Winston-Salem, N.C., sewage treatment ponds, fide Ramona Snavely.

SANDERLING: Three were present, along with three Western Sandpipers, at the Winston-Salem, N.C., sewage treatment ponds on 16 July, Ramona Snavely.

GREAT BLACK-BACKED GULL: One was seen at the Hatteras Island, N.C., ferry dock on 28 June by Mike Browne.

RING-BILLED GULL: Three birds, all immatures, were seen on 18 May near Asheville, N.C., by Robert Ruiz, an uncommon sighting at that inland location.

BONAPARTE'S GULL: Very unusual summer occurrences were recorded at Morehead City, N.C., where individuals were seen on 21 and 29 June by John Fussell.

BLACK-LEGGED KITTIWAKE: One was seen at Pea Island N.W.R. on the North Carolina Outer Banks on 17 May by N.F. Williamson.

GULL-BILLED TERN: An individual was seen on 15 and 16 July at Salem Lake near Winston-Salem, N.C., by Fran Baldwin, Charles Frost and Ramona Snavely, an unexpected inland occurrence and the first for Forsyth County.

COMMON TERN: Three were seen inland at Lake Gaston, Warren County, N.C., on 3 June by Harry LeGrand.

LEAST TERN: One was found well inland at Lake Hartwell near Clemson, S.C., on 3 June by Sidney Gauthreaux and Gene Hayes.

BLACK TERN: Two were seen near Bennettsville, S.C., on 12 July by Robin Carter and Stanley Alford, and one was seen at Salem Lake near Winston-Salem, N.C., on 16 July by Wayne Irvin.

GROUND DOVE: Nesting was reported during the 1975 summer season at Topsail Beach, N.C., by Mrs. Emma Thomson, fide David Lee. The species is said to have been breeding there for the past three years.

YELLOW-BELLIED SAPSUCKER: Eleven were seen and heard in the vicinity of Wayah Bald in western Macon County, N.C., on 1 July by Harry LeGrand. This tally is noteworthy because sapsuckers are generally thought to be rather uncommon as breeders in the southern Appalachians.

GRAY KINGBIRD: One was seen on 13 June at Topsail Beach, N.C., by Gail Whitehurst.

WILLOW FLYCATCHER: Three individuals were heard singing in Jackson County, N.C., in the vicinity of Cullowhee on 8 June by Harry LeGrand.

HORNED LARK: An individual was seen on 4 June at Carolina Sandhills N.W.R., Chesterfield County, S.C., by Paul McKenzie. Elsewhere, one was seen at Seaforth Lake, Chatham County, N.C., on 26 June by Robin Carter. No evidence of nesting was indicated at either location.

BANK SWALLOW: Two early fall transients were seen at Clemson, S.C., on 12 July by Harry LeGrand.

BARN SWALLOW: This species is continuing to increase as a summer resident in eastern North Carolina. It is reported to be breeding commonly in Nash County by Louis Fink, and field work this summer by Merrill Lynch established nesting records for Bertie, Hertford, Gates, Perquimans, Washington, Tyrrell, and Dare Counties.

CEDAR WAXWING: A few apparently summered in the Winston-Salem, N.C., area as evidenced by eight sightings of individuals during the period mid-June through mid-July, reported by Kevin Hintsa and Ramona Snavely.

LOGGERHEAD SHRIKE: A pair was seen feeding young near Morehead City, N.C., in late May by John Fussell, a rare nesting record for that coastal locality.

RED-EYED VIREO: One was found in spruce-fir forest above the 6600-foot elevation near the summit of Mount Mitchell in Yancey County, N.C., on 17 July by David Lee.

PROTHONOTARY WARBLER: A rare spring record for the Asheville, N.C., area is represented by a specimen found dead after hitting a window there on 21 April, fide Robert Ruiz (specimen to Warren Wilson College).

SWAINSON'S WARBLER: Singing males were found to be very common along US 178 near Rocky Bottom in Pickens County, S.C., where 16 were counted on 5 June by Sidney Gauthreaux, Paul Hamel, and Harry LeGrand. Elsewhere, a new summer record for the piedmont was noted at Stone Mountain in Wilkes County, N.C., where a singing male was found on 16 July by David Lee.

WORM-EATING WARBLER: Two males were heard singing near East Lake in Dare County, N.C., on 11 June by Merrill Lynch. Elsewhere in the coastal plain, a singing male was found near Merrimon in Carteret County, N.C., on 19 June by John Fussell.

BLACK-THROATED GREEN WARBLER: One was seen and heard at Moore's Knob in Hanging Rock State Park, Stokes County, N.C., on 7 June by Robert Teulings.

BOBOLINK: An unusual late-June occurrence was recorded at Seaforth Lake in Chatham County, N.C., where a male was seen on 26 June by Robin Carter.

NORTHERN ORIOLE: An uncommon piedmont nesting was recorded at Winston-Salem, N.C., where a pair was seen feeding young on 5 June by Ramona Snavely.

DICKCISSEL: A nesting attempt was reported at Pendleton, S.C., by Harry LeGrand, who found a male on territory there in May and later observed a female carrying nesting material on 27 May. Subsequent observations indicated, however, that the attempt failed and the site was abandoned; no birds were seen after 14 June.

RED CROSSBILL: One was found in the western area of Fort Bragg Military Reservation, Hoke County, N.C., on 8 July by Jay Carter.

WHITE-CROWNED SPARROW: An individual in adult plumage was seen on 26 July at Braswell's Farm near Rocky Mount, N.C., by Louis Fink.

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The Chat

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The Chat

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OUR COVER—Jack Dermid photographed a female Prothonotary Warbler tending her nest in an old pump at Camp Bryan, Lake Ellis, N.C. (photo courtesy N.C. Wildlife Resources Commission). Three drawings by John Henry Dick appear in the Spring *Chat:* Hooded Warbler, page 27; Osprey, page 44; and Bald Eagle, page 46.

BREEDING SEASON HABITAT AND DISTRIBUTION OF THE RED-BREASTED NUTHATCH IN THE SOUTHERN BLUE RIDGE MOUNTAIN PROVINCE

MARCUS B. SIMPSON JR.

According to the A.O.U. *Check-list* (1957) the Red-breasted Nuthatch (*Sitta canadensis*) nests widely through Canada, the northern United States, and down the Appalachian highlands to its southern breeding limit in eastern Tennessee and western North Carolina. Pearson et al. (1959) state that the species breeds on "some of the higher mountains" but give no details of habitat selection. Despite evidence to the contrary, it is commonly believed that the bird is strictly confined during the breeding season to forests of red spruce (*Picea rubens*) and Fraser fir (*Abies fraseri*) in the mountain region. This paper reviews data indicating that the Red-breasted Nuthatch utilizes at least three distinct forest types in the southern Blue Ridge Province during the spring and summer months.

HABITAT TYPES

1. *Spruce-fir Forests.* The so-called Canadian zone or boreal forests of red spruce and Fraser fir are the major habitat used by the Red-breasted Nuthatch in the southern Appalachians, and the bird has been reported during the breeding season from every known stand of this community-type in the region. Briefly, the nuthatch has been thoroughly documented as a common summer resident in spruce-fir forests of the Great Smoky Mountains (Stupka 1963); northern Great Balsam Mountains, Plott Balsam Mountains, southern Great Balsam Mountains, Pisgah Ridge, Shining Rock Ledge, Blue Ridge Mountains, Nantahala Mountains, and Long Hope Creek in Watauga County (Simpson, present study); Black Mountains (Brewster 1886, Cairns 1889, Simpson 1972); Grandfather Mountain (Alexander 1973; Simpson, present study); Roan Mountain (Ganier 1936; Fred Behrend, pers. com.); and the Mt. Rogers-Whitetop area of Virginia (J.J. Murray 1952; Simpson, present study). Breeding densities have been reported from the Smokies by Alsop (1970) and the Black Mountains by Adams (1959), while documented nestings have been described in the Smokies (Stupka 1963), Black Mountains (Burleigh 1941, Cairns 1889), and Roan Mountain (Ganier 1936).

2. *Hemlock Forests.* The eastern hemlock (*Tsuga canadensis*) is a fairly common forest tree through most of the southern Appalachians, where it may occur locally in fairly dense stands as a major canopy dominant. There are four known localities in the southern Blue Ridge where Red-breasted Nuthatches have been seen in this forest type during the breeding season. At Highlands, Macon County, N.C., the bird has been observed in hemlock forests since Brewster (1886) first noted a pair in an "extensive 'laurel swamp' shaded by giant hemlocks" at an elevation of 1220 m (4000 feet) in late May 1885. There are many subsequent records of the species from the Highlands Plateau, particularly in the vast hemlock stand known as the Primeval Forest or Ravenel's Woods. The observations have been summarized by Stevenson (1941) and Johnston (1964), while additional records are found in the biota files of the Highlands Biological Station. These sightings have been at elevations from 1130 m (3700 feet) to 1220 m (4000 feet). In the Unicoi Mountains along the state line between North Carolina and Tennessee, Ganier and Clebsch (1946) found two Red-breasted Nuthatches in a grove of virgin hemlock at 1341 m (4400 feet) in Graham County, N.C. during their exploration of the range in June 1944. In the Great Craggy Mountains, Buncombe County, N.C., I have found three to five pairs of Red-breasted Nuthatches during June 1970 and 1971 in the magnificent hemlock stand at Craggy Mountain Scenic Area in the headwaters of Carter Creek at an elevation of 1220 m (4000 feet). Finally, I have

seen one to three pairs of the nuthatch on numerous occasions during the summer months in the hemlock woods bordering Sim's Creek at 1097 m (3600 feet) along the Blue Ridge Parkway in Watauga County, N.C. Although hemlock occurs at all elevations in the mountains, the nuthatch has been reported only from sites between 1097 m (3600 feet) and 1341 m (4400 feet). I am not aware of any nesting records or population density studies from this habitat type.

3. *White Pine Forests.* The white pine (*Pinus strobus*) is a common forest tree in western North Carolina, and in some locales it may form almost solid stands, a notable example occurring near the Highlands Biological Station, Macon County, N.C. At this site, Red-breasted Nuthatches have been seen on many occasions during June and July by Henry Stevenson, Thelma Howell, J. Cheek, and Toliver Crunkleton (pers. com.; biota cards, Highlands Biological Station). I noted a pair of these nuthatches in the white pines at the Biological Station throughout the month of June 1969, although no evidence of nesting was found. The elevation of this site is 1170 m (3840 feet).

SUMMARY

The Red-breasted Nuthatch is a permanent resident in the southern Blue Ridge Mountains where it occurs during the breeding season in three distinct types of coniferous woodlands. The majority of the birds utilize the high elevation forests of spruce and fir above 1372 m (4500 feet), but the species also inhabits hemlock stands between 1097 m (3600 feet) and 1341 m (4400 feet) in at least four widely separated locales. At Highlands the nuthatch has been reported in white pine stands at 1170 m (3840 feet).

Bent (1948) mentions nesting in spruce, fir, hemlock, pine, and a variety of hardwood forests; so the occurrence of the species in these forest types in the southern Appalachians is consistent with its selections elsewhere.

The southern breeding limit of the bird in the eastern United States is on the Highlands Plateau, Macon County, N.C. Observers should be alert to document additional sites where this bird occurs as a summer resident so that its breeding range can be completely mapped out in western North Carolina.

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Department of Laboratory Medicine, Johns Hopkins Hospital, Baltimore, Maryland 21205, 15 February 1976. [Present address: P. O. Box 167, Statesville, N.C. 28677.]

BOOK REVIEW

AUTUMN HAWK FLIGHTS. Donald S. Heintzelman, Rutgers University Press, 30 College Avenue, New Brunswick, N.J. 08903, 1975. 399 p. Illus. Index. $30.00.

Hawks, unlike most birds, migrate during the day; consequently their sometimes spectacular flights south in the fall are witnessed and enjoyed by thousands of enthusiastic birdwatchers. An interest in migration, and a general fascination with birds of prey, have for many years brought uncounted numbers of people to key points in the eastern United States where the southern passage of hawks can be observed and their numbers counted.

Much has been learned about the timing of these flights, the navigational principles involved, and the weather systems that influence them. In fact, more is known about the migratory patterns of North American hawks than about those of most birds. This knowledge spawns more questions, and the answers to some of them could have far reaching merit. Perhaps I am just trying to justify the hours which many of us have squandered watching hawks, but somehow the data gathered should provide information on hawk population trends. Then, because of the hawks' role as a top predator in complex food webs, this information could be used to help assess the status of entire communities.

If you are interested in any of these problems, or are simply captivated by soaring hawks, you will find *Autumn Hawk Flights* an interesting reference. The author has assembled a great deal of information, much of which comes from reports and other sources which could otherwise be difficult to obtain. The text has six parts: (1) an introduction describing methods of observation and identification; (2) a survey of the known eastern hawk lookouts; (3) "Raptor Morphology, Anatomy, and Flight"; (4) and (5) discussions of migration and weather and of migration routes; and (6) on the evolution of the Broad-winged Hawk. The book contains 40 figures, 60 tables, 48 maps, 88 black-and-white photographs, and an extensive bibliography.

Despite containing a wealth of useful information, many of the 18 chapters do not live up to their ambitious titles. (Part 6 is particularly weak.) The tables, figures, and maps vary considerably in value. Most of the pictures are good shots of hawks in flight, and much can be learned from them. Others, mostly of various lookouts and people peering through binoculars, contribute little, except possibly to the cost of the book. This already is unnecessarily high and could have been held down by more judicious editing. Much of the material in the book stems from Heintzelman's own observations on Bake Oven Knob in Pennsylvania, and most of the rest is from a relatively confined area of the central Atlantic states. Some of the author's opinions and speculations do not seem justified in view of scant data.

Hopefully, future editions will show improvement, for in all fairness the book is a useful one that, judging from the crowds at Hawk Mountain, should have a large audience. Perhaps CBC members will be inspired by the lack of data on hawk movements in the Carolinas and will not be influenced by Heintzelman's belief that only those observations from places receiving large volumes of hawk traffic are significant. —DAVID LEE, 1 September 1975.

CBC Roundtable

... with Louis C. Fink

Museum Announces New Journal

The North Carolina State Museum of Natural History announces a new journal, BRIMLEYANA, the Bulletin of the N.C. State Museum. Contents will emphasize the zoology and general ecology of the southeastern United States, especially North Carolina and adjacent areas. Consecutively numbered issues will appear at irregular intervals. Information for potential contributors to BRIMLEYANA may be obtained from the Editor (Dr. John E. Cooper, Director of Research and Collections), and purchase and exchange information from the Managing Editor (Mrs. Sarah S. Robinson, Director of Publications) at: N.C. State Museum of Natural History, P.O. Box 27647, Raleigh, N.C. 27611. Dr. John B. Funderburg, Director of the Museum, is Editor-in-Chief.

Summer Decline of Mockingbirds in South Carolina

Paul A. Stewart, 203 Mooreland Drive, Oxford, N.C. 27565, has published a report in *The Journal of Wildlife Management* relating to the absence of Mockingbirds (*Mimus polyglottos*) from agricultural areas in South Carolina during the late summer. Using a method outlined in his article, Dr. Stewart verified that the birds were reasonably abundant in urban and suburban areas in the same vicinity, and also abundant in agricultural areas in North Carolina. He postulates that the high loss of Mockingbirds may be due to the high acreage devoted to cotton and the insecticides sprayed from airplanes: Azodrin and Monocrotophos. Stewart admits that more study is needed and invites readers of *Chat* to make personal observations.

Colonial Bird Register

National Audubon Society and the Cornell Laboratory of Ornithology have organized the Colonial Bird Register to establish a computerized data base for the collection and dissemination of information concerning birds that nest in colonies. CBC members who have an opportunity to study colonial breeders are invited to become cooperators in the program. For further information, write Donald A. McCrimmon, Director, Colonial Bird Register, Cornell Laboratory of Ornithology, 159 Sapsucker Woods Road, Ithaca, New York 14853. Many CBC members will recall having met Dr. McCrimmon during his graduate student days at North Carolina State University in Raleigh.

Former CBC Officer Dies

Mecklenburg Audubon Society members were saddened to learn that Beatrice Brown Potter, widow of George C. Potter, died at Woodland Hills, California, on 17 March 1976. She was 81 years old. Bea Potter lived in Charlotte from 1942 until

1970, during which time she served as secretary of Carolina Bird Club for 5 years and held various offices in Mecklenburg Audubon Society, including the presidency.

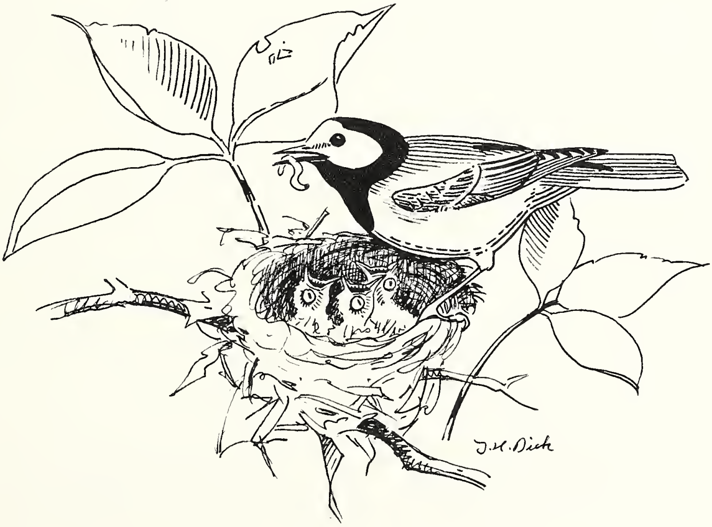
County Bird Lists Needed for North Carolina Checklist

Your help is needed in preparing an annotated checklist of the birds of North Carolina. The Carolina Bird Club Research and Records Committees are compiling a booklet summarizing our present knowledge of the status and distribution of those bird species that have been recorded in the state. The publication, which will be available to all naturalists in the area, will consist of two parts: (1) an annotated list of the birds with descriptions of their geographical distribution, seasonal occurrence, and relative abundance, and (2) a set of county outline maps showing the status of each species in those counties where the bird is known to have been seen.

Committee members need your help to determine the status of the various avian species in the places where you have gone birding. Despite the fact that people have been observing birds in North Carolina for over a century, there are many areas from which no bird records have ever been obtained. Checklists have been published from only about a dozen of our 100 counties. As a result, there is a dismaying lack of detailed information regarding the exact distribution of even our common birds.

Worksheets and instructions for completing them are available from Dr. Marcus B. Simpson, Jr., P.O. Box 167, Statesville, N.C. 28677. By filling out a worksheet for your home county or favorite vacation spot, you can provide records that will make the distribution maps far more reliable than they otherwise would be. Without your help, there may be conspicuous "holes" in the known distribution of many species. The worksheets have been designed so you can provide valuable information without spending a lot of time and effort typing a lengthy bird list or writing notes in longhand.

The contribution of each participant will be acknowledged, and the worksheets will be filed at the North Carolina State Museum of Natural History in Raleigh for use at a later time in preparing a new edition of *Birds of North Carolina.*—MARK SIMPSON, P.O. Box 167, Statesville, N.C. 28677.



CHRISTMAS BIRD COUNT 1975		COAST						COASTAL PLAIN								PIEDMONT											MOUNTAINS			
	Total individuals	Bodie-Pea Is., N.C. 30 December	Morehead City, N.C. 21 December	Wilmington, N.C. 27 December	Litchfield-Pawleys Is., S.C.—4 January	McClellanville, S.C. 21 December	Charleston, S.C. 28 December	Beaufort Co., N.C. 28 December	Pamlico Co., N.C. 21 December	Fayetteville, N.C. 4 January	Southern Pines, N.C. 28 December	Florence Co., S.C. 21 December	Columbia, S.C. 20 December	Aiken, S.C. 28 December	Roanoke Rapids, N.C. 4 January	Raleigh, N.C. 20 December	Durham, N.C. 21 December	Chapel Hill, N.C. 4 January	Rockingham Co., N.C. 21 December	Greensboro, N.C. 3 January	Winston-Salem, N.C. 3 January	Stanly County, N.C. 20 December	Iredell Co., N.C. 4 January	Charlotte, N.C. 27 December	Greenville, S.C. 27 December	Caldwell Co., N.C. 29 December	Tryon, N.C. 29 December	Brevard, N.C. 27 December	Avery Co., N.C. 3 January	Buncombe Co., N.C. 27 December
Common Loon	717	153	280	159	93	3	20	....	....	....	4	....	....	....	3	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....
Red-throated Loon	369	89	12	27	213	10	16	....	....	....	....	....	....	....	*	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....
Red-necked Grebe	4	....	....	....	....	2	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Horned Grebe	574	29	31	48	31	60	158	5	....	....	14	....	....	....	113	25	....	1	....	31	....	23	....	1	....	....	....	....	....	4
Pied-billed Grebe	711	114	35	60	33	35	41	30	7	13	63	9	4	6	29	89	9	25	30	29	24	2	1	5	7	....	....	5	....	6
Brown Pelican	223	....	....	77	4	20	122	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gannet	2790	2273	133	208	171	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Cormorant	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dbl.-cr. Cormorant	4730	16	3717	190	159	450	193	1	....	....	....	3	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Anhinga	25	....	....	2	2	12	4	....	....	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Blue Heron	523	97	69	73	22	50	82	9	4	4	2	4	4	5	13	18	6	10	3	15	10	21	1	....	....	....	....	1	....	....
Green Heron	5	....	....	1	....	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....	2	....	....	....	....	....	....	....	....	....
Little Blue Heron	129	30	19	16	13	20	31	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Cattle Egret	7	1	2	*	4	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Egret	372	49	35	101	13	100	71	....	....	....	....	....	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Snowy Egret	221	35	18	63	16	40	49	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Louisiana Heron	328	46	25	32	33	75	117	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black-cr. Night H.	189	132	13	10	1	12	19	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Yellow-cr. Night H.	7	....	....	2	....	1	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Least Bittern	2	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
American Bittern	16	14	....	*	....	1	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Glossy Ibis	6	1	....	4	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
White Ibis	476	3	45	101	*	250	77	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Whistling Swan	1085	840	....	....	....	20	1	224	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Canada Goose	11,702	8650	1	21	125	12	....	150	....	3	....	25	....	....	2150	4	....	....	10	3	537	....	....	11	....	....	....	....	....	....
Brant	5	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Snow Goose	16,490	16,139	*	....	....	350	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mallard	1803	123	28	180	78	312	117	82	2	55	28	....	23	....	118	230	3	71	35	87	107	25	65	4	....	....	....	....	....	30
Black Duck	1234	850	10	26	31	89	129	5	2	1	8	....	....	....	13	13	1	....	....	5	46	5	....	....	....	....	....	....	....	....
Gadwall	634	490	11	5	3	7	32	....	....	....	....	....	....	....	26	44	....	....	....	....	....	....	....	15	....	....	....	....	....	....
Pintail	2921	2630	24	75	....	29	155	....	1	....	....	....	....	....	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Green-winged Teal	5732	4800	54	5	*	600	223	....	....	7	....	....	....	....	16	25	....	....	....	....	1	....	....	1	....	....	....	....	....	....
Blue-winged Teal	318	39	1	20	....	50	208	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
American Wigeon	1086	349	100	18	102	55	50	135	....	....	....	....	....	....	193	53	....	1	....	....	6	....	....	24	....	....	....	....	....	....
N. Shoveler	440	324	....	5	5	24	75	....	....	*	....	....	....	....	6	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Wood Duck	176	....	9	19	*	13	22	....	2	10	3	2	2	....	19	13	....	2	....	2	1	6	....	49	1	....	....	1	....	....
Redhead	108	72	....	6	6	1	5	3	....	....	7	....	....	....	1	3	....	....	....	....	....	....	....	4	....	....	....	....	....	....
Ring-necked Duck	1453	46	7	11	50	60	49	2	....	7	425	20	13	3	138	348	6	18	....	1	45	....	4	133	....	....	....	....	....	67
Canvasback	2230	338	....	94	250	8	1203	128	170	5	6	....	....	....	....	19	....	2	....	....	2	....	....	5	....	....	....	....	....	....
Greater Scaup	68	2	....	3	....	60	....	....	....	....	2	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

Lesser Scaup	651	515	20	4	*	15		26			1	1			13	26				1	1				2					26
Scaup (sp. ?)	1466						1461				5																			
Common Goldeneye	40	26	1	3	1	1	7								1															
Bufflehead	579	113	73	51	24	100	119	8	10		5				*	57	3			4				8				4		
Oldsquaw	51	44	1	1	5																									
Harlequin Duck	2					2																								
King Eider	1	1																												
White-winged Scoter	26	20		4			2																							
Surf Scoter	119	90	17	3	1	8																								
Black Scoter	739	129	17	2	15	150	426																							
Scoter (sp. ?)	80		15	65																										
Ruddy Duck	2256	642	2	14	4	36	315	486	415	*	101				1	224		2		13	1									
Hooded Merganser	704	87	29	48	20	100	85	2			106	22			63	123		3		8	1			7				*		
Common Merganser	4														1						2		1							
Red-br. Merganser	1640	1031	123	305	42	29	106	2							1					1										
Merganser (sp. ?)	1																1													
Turkey Vulture	377		5	23	7	64	98	3			2	1		8	36	1	23	26	21	1	4	14	36				2	2		
Black Vulture	174			4	7	20	62					2	4	5	6		11	45			1		7							
Sharp-shinned Hawk	74	15	5	6	5	6	4				1		1	1	5	4	7	7			2	1	2		1	1				
Cooper's Hawk	31	1		2		1	6	1	3							3	1	1	1	4	2		1		1	1	*	*		2
Red-tailed Hawk	364	4	12	17	3	35	36	5	8	12	2	4	20	2	20	46	22	30	13	10	14	4	13	11	5		4	3	1	8
Red-shouldered H.	80	2	6	2	5	4	17		4	1	1	1	2	4	6	1	5	2	1	5			3	1	2	2	2			1
Broad-winged Hawk	3					1	1																1							
Rough-legged Hawk	3	2					1																							
Bald Eagle	5					4	1																							
Marsh Hawk	228	44	19	21	6	75	29	1	4			1	5	1	9	1	1	3	*				6	1	1					
Osprey	9				1				1													7								
Peregrine Falcon	3	1			1	1																								
Merlin	15	10	2	2	1																									
Am. Kestrel	643	48	81	51	33	30	23	37	42	32	7	33	18	3	33	43	9	12	17	23	8	9	21	2	4	2	1	11	2	8
Ruffed Grouse	5																											2	1	2
Bobwhite	716	10	31	45		4	12	8		9	60	38	25	28	82	49	48	90	30	23	25	10	5	6	9	16	*	18		35
Ring-neck. Pheasant	17	17																												
Turkey	*															*		*												
King Rail	11	2	1	6		1	1																							
Clapper Rail	117	8	21	19	5	15	49																							
Virginia Rail	35	9	12	7		1	3		1							2														
Sora	13	2	5	2		1	2								1															
Common Gallinule	127	1	10	5	28	50	33																							
American Coot	7930	910	164	195	589	1000	461	1069	2	54	129	2275	35		20	697		92	7	39	96	2	2	37	49				1	5
Am. Oystercatcher	778		65	122	12	150	429																							
Semipalmated Plover	213	1	50	38	5		119																							
Piping Plover	126	41	54	23	2		6																							
Killdeer	1372	10	129	40	75	7	33	32	111	14	12	113	113	12	88	130	21	79	17	67	57	10	17	83	24			54		24
Bl.-bellied Plover	1154	347	204	343	57	18	185																							
Ruddy Turnstone	344	2	20	84	65	15	158																							
Am. Woodcock	48	2	7	11		1	5			1				1	1	7	1	2	1	3	3			2						
Common Snipe	242	52	32	2	*	21	4		3	16	19	1		2	20	22	9		1		32			6						
Long-billed Curlew	1		1																											
Whimbrel	7		1				6																							
Spotted Sandpiper	11		1	1	1	1	6								1															
Willet	609		219	128	42	42	178																							
Greater Yellowlegs	170	63	32	24		25	26																							

CHRISTMAS BIRD COUNT 1975	Total individuals	COAST						COASTAL PLAIN								PIEDMONT											MOUNTAINS			
		Bodie-Pea Is., N.C. 30 December	Morehead City, N.C. 21 December	Wilmington, N.C. 27 December	Litchfield-Pawleys Is., S.C.—4 January	McClellanville, S.C. 21 December	Charleston, S.C. 28 December	Beaufort Co., N.C. 28 December	Pamlico Co., N.C. 21 December	Fayetteville, N.C. 4 January	Southern Pines, N.C. 28 December	Florence Co., S.C. 21 December	Columbia, S.C. 20 December	Aiken, S.C. 28 December	Roanoke Rapids, N.C. 4 January	Raleigh, N.C. 20 December	Durham, N.C. 21 December	Chapel Hill, N.C. 4 January	Rockingham Co., N.C. 21 December	Greensboro, N.C. 3 January	Winston-Salem, N.C. 3 January	Stanly County, N.C. 20 December	Iredell Co., N.C. 4 January	Charlotte, N.C. 27 December	Greenville, S.C. 27 December	Caldwell Co., N.C. 29 December	Tryon, N.C. 29 December	Brevard, N.C. 27 December	Avery Co., N.C. 3 January	Buncombe Co., N.C. 27 December
Lesser Yellowlegs	56	32	8		3	10	3																							
Red Knot	158		4	35	93	1	25																							
Purple Sandpiper	10		5	5																										
Least Sandpiper	146	51	12	1		2	76									4														
Dunlin	13,091	2170	6545	1821	62	65	2428																							
Short-bill. Dowitcher	626	13	205	186	6	216																								
Long-bill. Dowitcher	19	17	2																											
Dowitcher (sp. ?)	218						218																							
Stilt Sandpiper	5	5																												
Semip. Sandpiper	2		2																											
Western Sandpiper	2551	51	2040	40	2	7	411																							
Marbled Godwit	21		13	3			5																							
Sanderling	3203	2309	252	336	203	25	78																							
American Avocet	66	66																												
Parasitic Jaeger	3	2		1																										
Jaeger (sp. ?)	4	1		3																										
Gull (sp. ?)	1																				1									
Iceland Gull	1	1																												
Gr. Bl.-backed Gull	1185	1090	79	10	*		2	4																						
Herring Gull	10,045	4688	3748	421	140	600	312	126	7						2					1										
Ring-billed Gull	15,098	4238	1818	1500	321	200	216	572	228	*		1	471		4671	5			1	667		89		100						
Laughing Gull	2239	566	1340	26	3	300	4																							
Bonaparte's Gull	396	302	27	24	13	10	12								8	*														
Black-leg. Kittiwake	2	2																												
Forster's Tern	682	207	174	232	13	33	23																							
Common Tern	14				2		12																							
Royal Tern	286	19	80	171	1	10	4		1																					
Caspian Tern	138	1		12	12	11	102																							
Black Skimmer	796		101	548	2		145																							
Dovekie	2	2																												
Rock Dove	2129	1	101	245				19	20	6	6		32	12	38	598	103	128	62	143	376	5	13	32	11	98		4		76
Mourning Dove	9254	68	93	206	26	15	62	13	24	515	199	750	241	20	1413	1067	195	610	436	805	710	93	111	253	31	324	274	363		337
Ringed Turtle Dove	2																				2									
Ground Dove	37		*	4	21		12																							
Barn Owl	15	8	2																	1	2		*			2				
Screech Owl	71	7	3	8	1			1		1	1			1	3	18	1	2	4	4	9		2	*	1	2			1	1
Great Horned Owl	32	2	1	2	1		2			2	3		1	3	3	5	1		*		3	2						1		
Barred Owl	45		6	2	1	2	10				2	2		1	1	2	2	5			4	1	1	1				1		1
Long-eared Owl		See North Wilkesboro, N.C., report presented in paragraph form.																												
Short-eared Owl	1	1																												
Saw-whet Owl	1																					1								

Belted Kingfisher	524	79	33	38	16	53	94	11	7	6	6	8	3	1	4	18	13	18	11	23	37	9	5	1	3	2	2	11	3	9
Common Flicker	1710	130	77	167	85	90	157	49	24	43	41	96	79	16	137	92	79	83	36	56	69	16	20	22	9	10	6	9	....	12
Pileated Woodpecker	247	2	11	3	5	18	63	8	5	2	6	10	3	7	14	2	2	3	6	3	4	5	4	....	1	6	10	24	4	16
Red-bellied Woodp.	868	14	10	42	22	25	63	13	3	11	28	31	22	21	56	79	39	97	30	62	83	22	19	22	10	10	12	9	....	13
Red-headed Woodp.	117	....	4	17	2	5	14	6	....	....	....	26	14	....	1	5	3	....	1	2	6	3	2	4	2	....	....	....	....	....
Yel.-bel. Sapsucker	441	3	3	20	6	24	57	3	....	7	15	10	38	11	24	49	21	27	11	16	23	12	4	10	5	4	12	4	1	21
Hairy Woodpecker	150	2	2	1	1	2	20	1	2	1	2	5	2	1	13	12	1	16	4	14	12	....	3	2	2	1	10	9	4	5
Downy Woodpecker	679	5	11	14	10	13	27	14	3	8	23	10	15	14	35	59	26	70	37	46	49	14	9	12	4	17	17	35	21	61
Red-cock. Woodp.	80	....	3	....	10	7	29	11	....	....	15	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eastern Phoebe	196	2	13	8	12	11	22	10	2	1	2	5	12	5	13	16	4	17	....	3	5	3	5	2	4	3	2	6	....	8
Horned Lark	393	....	....	....	....	....	....	....	....	....	2	....	....	....	350	....	....	*	....	16	3	2	20	....	....	....	....	....	....	....
Tree Swallow	2307	1850	....	445	....	....	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Blue Jay	2777	13	44	90	49	38	95	49	18	42	82	80	51	41	176	258	96	156	149	232	270	79	58	163	75	112	25	101	28	107
Common Raven	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....
Common Crow	4120	40	69	119	193	130	446	3	....	27	28	4	38	41	87	273	123	303	145	268	129	52	119	70	53	51	33	258	52	966
Fish Crow	1504	31	417	494	127	70	283	27	55	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Carolina Chickadee	3276	42	39	45	83	75	210	20	16	30	52	47	53	73	148	336	103	263	112	227	293	153	88	63	31	56	40	157	163	258
Tufted Titmouse	1965	....	6	25	30	40	69	71	4	23	32	36	11	28	61	178	43	182	78	103	265	83	34	22	31	93	62	99	40	216
White-br. Nuthatch	602	....	....	....	....	21	....	14	....	*	12	1	....	14	11	6	17	85	36	40	83	12	12	2	4	37	29	55	31	80
Red-br. Nuthatch	297	21	....	11	....	....	....	2	....	1	33	....	....	4	2	29	6	8	30	29	26	45	19	1	2	3	3	3	14	5
Brown-hd. Nuthatch	735	25	6	43	42	35	291	4	2	2	42	32	3	31	13	44	11	35	8	13	24	8	....	12	9	....	....	....	....	....
Brown Creeper	168	11	....	1	1	5	2	*	....	*	4	1	3	2	10	16	12	34	16	10	8	2	10	3	....	2	3	5	....	7
House Wren	176	19	55	22	4	35	18	....	1	1	2	2	....	1	1	9	....	....	3	....	....	....	1	....	....	....	2	....	....	....
Winter Wren	160	7	6	6	2	6	19	2	....	....	4	2	....	4	10	28	23	14	3	3	1	6	1	1	....	2	....	*	4	6
Carolina Wren	2025	143	58	58	30	20	147	28	14	29	31	55	23	27	117	248	82	209	52	97	174	52	39	48	16	21	33	60	18	96
Long-bill. Marsh W.	150	43	72	22	....	2	10	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Short-bill. Marsh W.	198	58	98	20	1	6	15	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mockingbird	1634	53	62	78	28	29	60	24	5	43	30	29	64	26	74	185	40	121	51	175	137	55	36	90	37	24	16	20	3	39
Gray Catbird	199	132	13	19	1	2	13	*	6	....	1	4	....	2	1	....	....	....	1	....	2	2	....	....	....	....	....	....	....	....
Brown Thrasher	306	8	11	19	3	8	34	5	4	5	11	18	10	4	24	33	18	19	4	23	7	21	4	3	4	....	....	4	....	2
American Robin	5270	1346	306	497	684	38	410	8	....	177	166	200	6	341	27	18	4	23	2	10	107	308	4	120	50	261	6	22	8	121
Hermit Thrush	191	20	17	10	2	6	15	1	....	3	14	5	2	7	12	19	10	18	6	1	4	4	2	....	....	....	....	1	7	5
Eastern Bluebird	1646	1	14	9	18	60	61	35	5	7	107	31	139	46	82	130	45	265	73	74	81	39	91	10	19	39	49	35	4	77
Bl.-gr. Gnatcatcher	43	....	1	6	....	20	15	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Golden-cr. Kinglet	1465	7	22	5	3	....	18	....	....	12	41	26	....	45	88	269	76	347	35	142	54	45	42	6	9	....	3	13	29	128
Ruby-cr. Kinglet	3566	6	54	92	165	125	642	9	4	54	116	133	69	189	101	425	174	373	92	112	209	158	85	18	25	5	11	2	3	115
Water Pipit	839	5	82	6	....	....	23	....	8	....	12	75	251	....	146	13	....	28	....	132	25	....	....	33	....	....	....	....	....	....
Cedar Waxwing	1839	2	4	15	175	....	31	....	....	1	60	....	....	45	337	349	103	13	*	30	436	85	....	82	52	16	....	....	3	....
Loggerhead Shrike	167	....	4	2	4	1	14	1	....	20	12	5	4	10	4	28	2	6	4	12	7	3	7	12	1	2	1	1	....	....
Starling	631,684	462	1485	2128	201	1	38	200	26	216	375	20,000	409	3345	2309	2304	832	1988	548	572,619	1687	179	770	984	205	347	588	129	70	17,239
White-eyed Vireo	13	....	2	1	1	1	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Solitary Vireo	31	....	4	3	3	2	15	....	....	1	*	....	....	1	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Black-and-white W	13	....	....	1	....	1	7	....	....	....	....	2	....	....	....	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....
Worm-eating Warbler	1	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Orange-crowned W.	20	5	4	6	1	1	2	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Yellow-rumped W.	28,573	19,582	2005	1336	1619	225	1604	53	122	21	16	700	13	46	85	318	188	154	56	124	163	38	64	6	9	1	....	....	....	25
Yellow-throated W.	8	....	....	1	1	1	3	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....
Pine Warbler	819	2	10	103	23	47	405	3	....	2	23	2	11	41	13	23	6	71	6	5	10	4	1	1	1	....	6	....	....	....
Prairie Warbler	6	....	....	....	1	2	2	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Palm Warbler	79	6	1	8	....	2	26	4	....	....	1	9	1	11	6	3	....	....	....	....	....	....	....	....	1	....	....	....	....	....
Com. Yellowthroat	175	18	42	12	23	8	31	....	....	1	3	18	8	2	3	3	2	*	....	....	1	....	....	....	....	....	....	....	....	....
Yellow-br. Chat	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
House Sparrow	4670	53	53	177	20	12	12	82	6	122	112	150	113	38	167	829	81	148	228	407	526	356	204	235	44	219	1	69	55	151

CHRISTMAS BIRD COUNT 1975	Total individuals	COAST						COASTAL PLAIN								PIEDMONT											MOUNTAINS			
		Bodie-Pea Is., N.C. 30 December	Morehead City, N.C. 21 December	Wilmington, N.C. 27 December	Litchfield-Pawleys Is., S.C.—4 January	McClellanville, S.C. 21 December	Charleston, S.C. 28 December	Beaufort Co., N.C. 28 December	Pamlico Co., N.C. 21 December	Fayetteville, N.C. 4 January	Southern Pines, N.C. 28 December	Florence Co., S.C. 21 December	Columbia, S.C. 20 December	Aiken, S.C. 28 December	Roanoke Rapids, N.C. 4 January	Raleigh, N.C. 20 December	Durham, N.C. 21 December	Chapel Hill, N.C. 4 January	Rockingham Co., N.C. 21 December	Greensboro, N.C. 3 January	Winston-Salem, N.C. 3 January	Stanly County, N.C. 20 December	Iredell Co., N.C. 4 January	Charlotte, N.C. 27 December	Greenville, S.C. 27 December	Caldwell Co., N.C. 29 December	Tryon, N.C. 29 December	Brevard, N.C. 27 December	Avery Co., N.C. 3 January	Buncombe Co., N.C. 27 December
E. Meadowlark	3692	290	189	86	38	20	77	18	64	134	50	100	123	20	510	363	192	173	53	174	208	132	215	57	76	74	68	128	....	60
Red-wg. Blackbird	161,849	1263	4342	8490	226	1000	1075	954	1344	5945	99	20,000	751	757	12,700	868	186	782	31	100,175	63	62	6	480	220	....	....	....	30	....
Northern Oriole	146	1	20	2	....	....	....	7	....	11	13	3	4	....	12	32	5	7	....	1	....	20	....	8	....	....	....	....	....	....
Rusty Blackbird	21,620	4	3	165	....	....	44	....	....	5	30	....	....	5	17	27	168	24	203	20,033	65	13	....	....	260	....	554	....	....	....
Boat-tailed Grackle	4393	363	2696	237	180	700	217	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Common Grackle	328,980	46	1	3230	37	35	541	138	82	30	132	40,000	766	524	23,712	156	414	351	10	250,391	5827	27	1	585	260	1	182	....	....	1501
Brown-hd. Cowbird	72,147	2	41	54	10	2	....	....	2	219	4	10,000	57	150	585	713	36	72	3	60,090	22	....	30	28	....	20	....	....	1	6
Blackbird (sp. ?)	500,300	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	500,000	300	....	....	....	....	....	....	....	....	....	....	....	....
Cardinal	4946	88	64	94	21	103	114	70	10	72	100	81	157	74	443	536	163	449	187	312	449	170	140	159	61	142	122	194	74	297
Painted Bunting	*	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Evening Grosbeak	1221	....	9	*	51	....	....	*	....	2	9	23	....	60	188	189	92	158	4	10	8	1	....	16	....	167	....	50	118	66
Purple Finch	2157	1	18	157	50	1	134	2	3	7	76	50	14	26	41	158	27	178	75	256	282	78	2	113	10	104	58	116	53	67
House Finch	180	....	1	....	....	....	....	....	....	....	....	....	....	....	15	49	12	1	42	21	22	....	....	2	1	14	....	....	....	....
Common Redpoll	3	....	....	....	....	....	....	....	....	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	3	....
Pine Siskin	753	28	50	4	....	5	5	....	20	1	114	....	....	....	14	113	49	26	5	72	75	58	15	42	....	6	37	4	....	10
Am. Goldfinch	3168	9	48	182	130	46	504	32	5	17	161	40	59	136	189	345	74	117	83	300	274	112	70	47	18	10	19	47	2	92
Red Crossbill	93	....	....	....	....	....	....	....	....	....	....	....	....	....	17	7	....	....	29	27	....	6	....	....	....	....	....	....	2	5
White-wg. Crossbill	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ruf.-sided Towhee	1940	118	36	80	28	70	169	26	10	90	66	18	101	45	69	193	92	109	57	96	167	40	17	76	28	45	25	35	7	27
Savannah Sparrow	1451	153	117	155	23	27	54	5	15	2	5	15	170	49	415	81	11	22	4	21	40	2	....	8	....	....	....	....	24	33
Grasshopper Sp.	2	....	1	....	....	....	....	....	....	1	....	....	....	....			....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sharp-tailed Sp.	78	44	15	9	....	9	1	....	....	....	....	....	....	....			....	....	....	....	....	....	....	....	....	....	....	....	....	....
Seaside Sparrow	54	14	2	26	....	8	4	....	....	....	....	....	....	....		....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Vesper Sparrow	94	7	1	1	....	....	....	....	....	36	....	2	42	2		....	....	....	....	2	....	....	1	....	....	....	....	....	....	....
Bachman's Sparrow	7	....	....	4	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dark-eyed Junco	13,611	13	56	108	183	50	108	184	28	175	541	485	102	77	1620	1356	486	1498	346	2099	1139	418	258	340	142	73	176	655	220	675
Tree Sparrow	3	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....
Chipping Sparrow	484	....	142	2	74	20	19	5	7	1	71	40	....	12	16	3	....	4	7	2	5	4	2	2	17	8	....	2	....	19
Field Sparrow	3056	14	23	70	52	5	15	38	12	7	60	30	259	69	634	272	71	199	101	246	314	46	74	118	58	43	26	50	....	150
White-cr. Sparrow	212	1	....	....	....	....	....	....	....	*	....	....	2	1	25	34	2	11	20	55	30	8	3	....	....	1	16	1	....	2
White-th. Sparrow	14,615	86	59	805	92	135	578	100	17	101	221	305	586	83	4684	1394	585	1194	269	888	909	215	356	183	69	134	59	125	50	333
Fox Sparrow	215	17	14	29	....	3	10	1	2	37	4	2	2	11	12	12	1	24	1	4	2	....	3	1	3	....	....	7	4	9
Swamp Sparrow	1700	174	296	136	43	144	247	6	10	4	37	31	13	7	277	178	41	16	1	20	6	5	2	2	....	....	....	1	....	3
Song Sparrow	4503	180	201	81	56	41	115	20	15	70	44	69	95	44	791	735	164	198	67	174	447	22	192	92	32	13	11	107	43	384

Lapland Longspur	5	1	....	....	....	....	....	....	....	....	....	....	....	....	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Snow Bunting	10	....	10	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Accipiter (sp. ?)	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....
Buteo (sp. ?)	2	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
"Peep" Sandpiper	950	....	....	600	....	....	350	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Junco X sparrow hybrid	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....
Total no. species	212	160	155	165	131	151	157	81	65	83	87	78	66	77	108	104	80	82	72	87	91	74	71	77	60	52	44	56	43	63
Total no individuals	2,004,739	86,168	36,518	30,281	8447	10,125	21,986	5569	3061	8656	4623	96,476	5787	6819	61,147	18,547	505,647	12,380	4162	1,012,596	17,511	3646	3482	5221	2122	2647	2618	3135	1203	24,160
Field observers	653	40	14	29	20	31	52	9	3	24	13	10	11	7	16	46	29	41	21	33	54	14	11	20	7	13	7	37	23	18
Yard observers	140	0	4	0	1	1	0	3	0	10	4	0	0	2	3	8	0	10	10	6	3	17	6	1	4	19	8	11	4	5
Field parties	230	9	8	10	7	6	10	4	2	8	6	4	4	4	9	20	9	18	6	11	15	8	4	8	5	4	3	12	7	9
Field-hours	1909.5	184	92	104	57	41	83	36	16	46	39	30	30	37	72	146	60	122.5	51.5	100	119	80	34	38	10.5	91	58.5	54	30	47.5
Field-miles by foot	1090	150	27	79	80	7	66	14	5	13.5	14	20	24	16	42	97	47.5	94	34	46	62	15	26	14	25	8	16	26	10.5	11.5
Field-miles by car, boat, horseback, bicycle	5385.9	288	175	343	100	97	205	26	147	106.5	172	30	79	125	180	270	241	219	276	535	348	95	220	205	75	95	168	118	190	257.4

*Seen in count area during count period but not on count day.

CHRISTMAS BIRD COUNT — 1975

HARRY E. LeGRAND JR.

The 1975 Christmas Bird Count for the Carolinas was a most unusual one. Thirty-one counts were received, 27 of which were conducted in 1974. Of these 27, 19 surpassed their 1974 species totals, and most of these 19 set all-time species highs. With so many record-breaking counts in 1975, I had reason to believe that the Count as a whole would surpass the record 227 species in 1972. (Three species reported in 1972 have since been lumped by the American Ornithologists' Union to drop the 230 total down to 227.) To my astonishment the 1975 grand total for species was only 212 (plus three others seen only during count period), the lowest total in many winters.

Undoubtedly the major reason for the somewhat low species count was the unusually cold weather which enveloped the Carolinas from mid-December until late in January. Thus, the record-breaking *locality* counts were due mostly to the observers' ability to find the uncommon and secretive but regularly occurring species, rather than to finding the outstanding rarities that often linger in the Carolinas during mild Decembers. Even though there were fewer straggling summer resident and transient species this winter than during the past several Christmas Bird Counts, a fair number of such stragglers were sighted. The cold weather, however, was at least partly responsible for the best invasion of northern species in many years. The most exciting of these northern species were two *Harlequin Ducks* at McClellanville; a *King Eider, Iceland Gull*, and two *Dovekies* at Bodie-Pea Island; a *Great Cormorant* at Wilmington; three *Common Redpolls* at Avery County; and a count period *White-winged Crossbill* at Raleigh! Also, all of the more common winter finches (*Evening Grosbeak, Pine Siskin, Purple Finch*, and *Red Crossbill*) made a good showing on the 1975 Count, as did *Red-breasted Nuthatches*. Highlighting the straggling species were five *Stilt Sandpipers* at Bodie-Pea Island, a *Worm-eating Warbler* at Fayetteville, a *Long-billed Curlew* again at Morehead City, two *Yellow-throated Warblers* at Chapel Hill, and an *Orange-crowned Warbler* and a *Prairie Warbler* at Raleigh. In a category all by itself was a *Great White Heron* at Bodie-Pea; unfortunately it is now considered only a color phase of the Great Blue Heron, but nonetheless it is a truly remarkable record. The King Eider, Stilt Sandpiper, Iceland Gull, and Worm-eating Warbler are first reports for the Christmas Count, bringing the cumulative total to 283 species sighted on count days. Readers should see the Compilers' Comments for details on these and other noteworthy records.

Wilmington's 165 species, tying its all-time high set way back in 1961, led all localities in species. Bodie-Pea was next with a record 160 species, followed by Charleston (157), Morehead City (a record 155), and a commendable 151 for McClellanville's first Christmas count effort. Outstanding inland counts were Roanoke Rapids' 108 species and Raleigh's 104, both also all-time records. Fayetteville and Florence County were welcome additions to the count table, especially since the coastal plain section of the Count has had inadequate coverage in recent years as compared to the other three regions of the Carolinas. Hilton Head Island and Clemson did not conduct counts this winter, and the Great Smoky Mountains National Park count was not published because its circle has been moved slightly to the west and is essentially wholly within Tennessee. Because of space limitations on the count table, the Dillon and North Wilkesboro counts are located in the Compilers' Comments section.

Slightly over two million birds were reported on the 1975 Count; three-fourths of these were Starlings and blackbirds in roosts at Greensboro and Durham. Hawks were reported in good variety and numbers, such as four *Bald Eagles* at McClellanville, a remarkable seven *Ospreys* at Stanly County, and national record ten *Merlins* at Bodie-Pea. Other notable high counts were 2040 *Western Sandpipers* and 1340 *Laughing Gulls* at Morehead City, an almost unbelievable 102 *Caspian Terns* at Charleston, an encouraging 602 *White-breasted Nuthatches* on all counts (with over 80 at both Chapel Hill and Winston-Salem), 4684 *White-throated Sparrows* at Roanoke Rapids, and 1850 *Tree Swallows* and national record 19,582 *Yellow-rumped Warblers* at Bodie-Pea! The *Loggerhead Shrike* continues its long-term decline, with only 167 recorded on the 29 counts on the table.

Even though the compilation of the counts continues to improve, a number of rare species, as usual, were reported with unsatisfactory details or no details at all. I rejected about a dozen records, including five species that were reported on no other count. Those without details I did not accept were: *Blue-winged Teal*, *Broad-winged Hawk*, and *Semipalmated Plover* all inland; *Black-capped Chickadees* away from the higher mountains; and a count period *Swainson's Thrush*. Species with unconvincing or simply incomplete details that I deleted were: an *Eastern Wood Pewee*, a *Gray-cheeked Thrush*, a *Bewick's Wren*, and four *Yellow Warblers*. I also deleted *Semipalmated Sandpipers* from a coastal location and *Black-capped Chickadees* from a high-mountain area. Although both reports might be correct, the Semipalmated Sandpipers and Black-capped Chickadees were not reported with details (see Compilers' Comments for more on these two species). I also accepted a handful of questionable sightings without details, especially when the record was not significantly different from previously published ones.

The late Allan Cruickshank, who single-handedly edited the Christmas Bird Count for many years for *Audubon Field Notes* and *American Birds*, was annually given problems by observers and compilers who insisted on reporting *Swainson's Hawks* from western states and *Broad-winged Hawks* and spotted thrushes (that aren't *Hermit Thrushes*) from throughout the country. In nearly every case those reports were made by inexperienced observers, and few active and experienced birders have ever seen these species in winter away from their regular wintering grounds, much less on Christmas counts. The same situation seems to be true for Carolina reports of *Broad-winged Hawks*, *Swainson's Thrushes*, *Gray-cheeked Thrushes*, and perhaps also *Wood Thrushes* and *Veeries*. I accepted three reports of *Broad-winged Hawks*, and even though they are reported from time to time in winter in the Carolinas, all sight records should be reported with full details, as immature Red-tailed Hawks and Red-shouldered Hawks of all ages can be confused with this species. I also believe that *Hermit Thrushes* are being turned into other thrushes by inexperienced observers on Christmas counts, and birders reporting such thrushes on winter counts need to supply me with lengthy details (especially call note if heard) before I can be convinced of their sightings. Despite my deletion of a handful of sightings and my concern over the reporting of several species, I am pleased with the reporting of details of unusual records on most counts.

COMPILERS' COMMENTS

COAST

BODIE-PEA ISLAND, N.C. (center: 2.7 miles SSE of Bodie Island Lighthouse).

30 December. The *Great Blue Heron* (white form) was seen by the Compiler and John Williamson at Pea Island; large size, large yellowish bill, light colored legs, and all-white plumage noted at close range. The Norman Messinger party found the *Cattle Egret* and three *White Ibis* at Pea Island, the latter birds having been present since late November. *Least Bittern* (Compiler, John Williamson) was flushed from vegatation along the edge of an impoundment on Pea Island. The Compiler also saw the female *King Eider* in flight over the surf; large all-brown body, stubby bill, and heavy neck seen well. The two light phase *Rough-legged Hawks* (Jim Warner) were seen together on Pea Island. The five *Stilt Sandpipers* were examined closely by Edmund LeGrand and Dwight Peake at the Bodie Island Lighthouse pond and compared with nearby Dunlins, Lesser Yellowlegs, and Long-billed Dowitchers. The long and slightly decurved bill, eye stripe, yellowish legs, and white rump with finely spotted tail were seen clearly. Joseph Hudick and Kenneth John saw the *Parasitic Jaegers* and one *Dovekie* from a boat offshore, and they found another *Dovekie* alive and in good con-

dition on the beach at Pea Island. These two observers also saw the *Iceland Gull* on the north side of Oregon Inlet. The bird was in second year plumage and was slightly smaller than Herring Gulls, had a very light coloration, smallish head, and slender all-dark bill. *Caspian Tern* and *Lapland Longspur* were found by Richard Peake. Female *Northern Oriole* (Compiler) was perched at the tip of a cedar on Pea Island. The *Snow Goose* total includes 14 blue phase birds, and one *Savannah* (*Ipswich*) *Sparrow* was reported. [Very neat report with full details for all unusual observations.—HL] —PAUL W. SYKES JR., P.O. Box 2077, Delray Beach, Fla. 33444.

MOREHEAD CITY, N.C. (center: 0.7 mile NW of Crab Point).

21 December. Most of the 3717 *Double-crested Cormorants* were at a roost on Bird Shoal. Edmund LeGrand flushed the *Least Bittern* at close range on Bird Shoal. *Whimbrel* (Harry LeGrand) was with a flock of Willets on the beach at Atlantic Beach. *Long-billed Curlew* (Edmund LeGrand) was at Bird Shoal where it has been present since December 1974 (except absent from May-July 1975). Merrill Lynch saw the *Spotted Sandpiper* at Huntley's Impoundment. Lynch also reported two *Semipalmated Sandpipers* in a remarkably large flock of 2000 Western Sandpipers at Huntley's Impoundment; he noted the short and stocky bills and heard the "krip-krip" calls of the Semipalmated. [Even though no specimen of the Semipalmated Sandpiper exists for the winter season along the Atlantic coast north of Everglades National Park, Florida (Phillips, *American Birds*, 1975, p. 799-806), I have accepted the sight record as valid. Specimens, however, are greatly desired to prove beyond doubt that Semipalmated Sandpipers are present in winter on the Carolina coast.—HL] Ray Winstead and the Compiler had an excellent view of the *Blue-gray Gnatcatcher*, perhaps the same bird found on last year's count. *White-eyed Vireos* (Compiler, Kevin Hintsa) were seen at close range; one of them was heard singing the previous week. A third bird was seen a week before the count, and a fourth was found 5 miles W of the count circle on 10 January 1976. Female *House Finch* had been seen by the Compiler since 6 December at his feeder and was found on count day by John Fussell II. Hintsa observed the *Grasshopper Sparrow* at close range, and the bird was also seen on 11 January 1976 by the Compiler. The 10 *Snow Buntings* (Harry and Edmund LeGrand) were in dunes at Radio Island. Noteworthy high totals were 219 *Willets*, 8 *Lesser Yellowlegs*, 2040 *Western Sandpipers*, 1340 *Laughing Gulls*, and 98 *Short-billed Marsh Wrens*. [Excellent details for all unusual sightings.—HL] —JOHN FUSSELL III, P.O. Box 520, Morehead City, N.C. 28557.

WILMINGTON, N.C. (center: Monkey Junction in Myrtle Grove).

27 December. The immature *Great Cormorant* (James Parnell) was sitting on a channel marker in Banks Channel at Wrightsville Beach. The white belly was seen clearly, and the observer is familiar with the species. The *Spotted Sandpiper* (Edna Appleberry, Greg Massey, Harry Latimer) was feeding at the edge of a freshwater marsh. Parnell saw the *Parasitic Jaeger*. *White-eyed Vireo* (Willard Greene, Maurice Barnhill) and *Yellow-throated Warbler* (Barnhill) were seen at Orton Plantation. *Black-and-white Warbler* (Massey) and *Yellow-breasted Chat* (Appleberry) were studied carefully along River Road. Barnhill and John Irvine obtained the high count of *Pine Warblers* by playing a Screech Owl tape in pine barrens. A large roost of *Common Grackles* and *Red-winged Blackbirds* was present near the battleship U.S.S. North Carolina. Jay Carter identified a *Savannah* (*Ipswich*) *Sparrow* at Carolina Beach. [Excellent, thorough details for all noteworthy records.—HL]—FRANCES NEEDHAM, Box 81, Wilmington, N.C. 28401.

LITCHFIELD-PAWLEYS ISLAND, S.C. (center: entrance to North Litchfield Beach on US 17).

4 January. The *Cattle Egrets* were seen by six observers. Andy, Julian, and Margaret Harrison saw the *Osprey*; *Peregrine Falcon* was observed by Dennis Forsythe, Robert Brown, and Tom Reeves. Mary Reed saw the *Prairie Warbler*. All four species are somewhat scarce in the area in winter, but have been seen in previous

winters and are not really unusual. Several observers, including the Compiler, thought that there was a scarcity of all birds in the area.—FREDERICK M. PROBST, Route 2, Box 80-C2, Pawleys Island, S.C. 29585.

McCLELLANVILLE, S.C. (center: 3.5 miles NE of McClellanville and 0.5 mile NW of Intracoastal Waterway).

21 December. The two *Harlequin Ducks* were seen from a shrimpboat on the ocean just off Sandy Point, about a mile offshore. The Compiler saw a male, noting the white stripes on the neck, white spots on the head, small size, dark plumage, and small bill. Dennis Forsythe saw a small dark duck in the same vicinity, with white spots on the face but no neck stripes, indicating a female bird. A total of 330 blue phase *Snow Geese* were seen, as compared to only 20 white phase birds.—JAY SHULER, P.O. Box 288, McClellanville, S.C. 29458.

CHARLESTON, S.C. (center: 14 miles NE of Mt. Pleasant and 0.5 mile E of US 17).

28 December. Count day was generally uneventful, with few sightings of rarities or the more uncommon species, even though viewing conditions were better than last year. All of the less common sparrows were missed. Species showing significant increases over last year were *Canvasbacks*, *Dunlins*, *bluebirds*, and *goldfinches*. Species down markedly from last year included *American Wigeons*, *oystercatchers*, *dowitchers*, *Marbled Godwits*, *Royal Terns*, *Golden-crowned Kinglets*, and *Song Sparrows*. The *Rough-legged Hawk* was seen by I.S.H. and Thomas Metcalf and T.F. Hassell on Bull's Island; the buteo shape and white at the base of the tail were noted. [I have included this count's 93 *Semipalmated Sandpipers* in the Western Sandpiper total, based on recent evidence by Phillips (*American Birds*, 1975, p. 799-806). From now on, thorough details must be supplied by all observers reporting Semipalmated Sandpipers on Christmas counts, and the call note must be heard and described.—HL]—JULIAN R. HARRISON, Biology Department, College of Charleston, Charleston, S.C. 29401.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: entrance of Upper Goose Creek into Pamlico River).

28 December. The two *Red-necked Grebes* (Compiler, Lauris Joyner, David Morris) were studied at close range from a boat. The dark neck, white throat, large and heavy straw-colored bill were seen on the birds at rest; also seen well in flight. The immature *Black-crowned Night Heron* (Hugh Sterling) was one of at least three birds seen in the area since October.—GERALDINE COX, Route 1, Box 151A, Merritt, N.C. 28556.

PAMLICO COUNTY, N.C. (center: intersection of SR 1324 and 1329 at Florence).

21 December. *Green Heron* (David Morris) was seen at close range in a roadside ditch. The *Osprey* was heard and seen, sitting and in flight, during the week before the count.—GERALDINE COX, address as above.

FAYETTEVILLE, N.C. (center: Market Square in Fayetteville).

4 January. As a result of the cold and windy weather, the counts were considered somewhat low. *Worm-eating Warbler* was seen by the Compiler in a bottomland woodlot in good light at 50 feet for 30 seconds; a brown-olivaceous warbler without wingbars and a dark split crown. Five *Northern Shovelers* (Compiler) were seen on Forest Lake on 6 January. Derb Carter saw a *Ring-billed Gull* and *White-crowned Sparrow* near Vander on 3 January. Carter and the Compiler saw the *House Wren* in a hedgerow and noted all field marks. Dot Wyatt and Barbara Stiles found the *Solitary Vireo*. [Good details for notable sightings, and a very good turnout of observers for an area that has been without a count for many years.—HL]—PHILIP CRUTCHFIELD, 901 Montclair Road, Fayetteville, N.C. 28304.

SOUTHERN PINES, N.C. (center: 1 mile NE of Skyline).

28 December. The *Common Loons* (John Fussell) were at Lake Surf. The pair of *Greater Scaups* (Compiler, Frances Needham, J.F. Parnell) were at a large lake in Whispering Pines with Redheads and Canvasbacks; round head, large nail on bill, and white wing stripe extending into the primaries were noted. The species is no longer considered rare in the area. *House Wrens* were found by two parties, and a *Solitary Vireo* was seen in longleaf pine woods near Southern Pines by the Compiler on 30 December. [Good details for the above records.—HL]—J.H. CARTER III, P.O. Box 891, Southern Pines, N.C. 28387.

DILLON COUNTY, S.C. (center: Dillon).

30 December. Pied-billed Grebe 6, Great Blue Heron 2, Mallard 2, Wood Duck 10, Bufflehead 1, Hooded Merganser 12, Red-tailed Hawk 11, Red-shouldered Hawk 1, Marsh Hawk 3, American Kestrel 13, Bobwhite 9, American Coot 21, Killdeer 25, Common Snipe 1, Rock Dove 6, Mourning Dove 169, Belted Kingfisher 1, Common Flicker 17, Pileated Woodpecker 3, Red-bellied Woodpecker 4, Hairy Woodpecker 1, Downy Woodpecker 1, Eastern Phoebe 2, Blue Jay 21, Carolina Chickadee 7, Tufted Titmouse 3, White-breasted Nuthatch 1, Carolina Wren 5, Mockingbird 22, Brown Thrasher 1, American Robin 18, Hermit Thrush 1, Eastern Bluebird 9, Golden-crowned Kinglet 1, Ruby-crowned Kinglet 4, Water Pipit 15, Cedar Waxwing 38, Loggerhead Shrike 3, Starling 184, Solitary Vireo 2, Yellow-rumped Warbler 10, Pine Warbler 1, House Sparrow 38, Eastern Meadowlark 163, Red-winged Blackbird 702, Cardinal 39, Rufous-sided Towhee 7, Savannah Sparrow 17, Vesper Sparrow 24, Dark-eyed Junco 56, Field Sparrow 3, White-throated Sparrow 174, Song Sparrow 8. Count period species: Ruddy Duck, Yellow-bellied Sapsucker, Brown-headed Nuthatch, *White-eyed Vireo*, Palm Warbler, Northern Oriole, Common Grackle, American Goldfinch, Swamp Sparrow. *White-eyed Vireo* (Compiler) was studied in great detail on 1 January 1976. 53 species; 1898 individuals; 3 field observers in 2 parties, plus 2 yard observers; 12 field-hours; 1 mile by foot; 73 miles by car. Lois McCallum, Marion McCallum, JOHN H. WILSON (Compiler), Box 535, Dillon, S.C. 29536.

FLORENCE COUNTY, S.C. (center: WOLS Radio Tower).

21 December.—E.C. CLYDE, Effingham, S.C. 29541.

COLUMBIA, S.C. (center: intersection of Gills Creek and Bluff Road).

20 December. *Water Pipits* were in greater numbers than usual, and practically all sparrows listed were in much greater numbers than last year.—GILBERT BRISTOW, 2921 Blossom Street, Columbia, S.C. 29205.

AIKEN, S.C. (center: Couchton, on Highway 215).

28 December. The very cold morning caused birding to be slow, individual numbers seemed to be down, and small field birds were hard to find. High usage of herbicides and pesticides on farmlands could be a contributing cause to low numbers of seed-eaters.—JEANNINE ANGERMAN, 1326 Evans Road, Aiken, S.C. 29801.

ROANOKE RAPIDS, N.C. (center: 1.4 miles SE of Weldon).

4 January. *Double-crested Cormorant* (Chris Marsh, Barbara Pugh, Louise Parker) was an adult seen in flight and resting on Roanoke Rapids Lake. These observers also found the male *Greater Scaup* at Rochelle Pond; all field marks were checked in comparison with 13 Lesser Scaups. John Fussell saw the adult *Snow* (*Blue*) *Goose* in a large flock of Canada Geese at the Johnston Farm on Occoneechee Neck. *Northern Shovelers* were seen by two parties. Female *Common Merganser* was on Stevenson's Goose Pond and was observed by all count participants, and the female *Red-breasted Merganser* (Compiler) was seen on Roanoke Rapids Lake. Paul McQuarry flushed the *Sora* from a cattail marsh at Burgwynn Farm. The *Spotted Sandpiper* (Harry LeGrand) was studied in great detail both in flight and feeding at the Johnston Farm. LeGrand also saw the flock of 17 *Red Crossbills* in scattered pines at a pasture at the Johnston

Farm. A *Red-throated Loon* was discovered on Roanoke Rapids Lake the week before the count and was seen on the day prior to the count, but it could not be located on count day. *Lapland Longspurs* were found for the fifth consecutive winter at Occoneechee Neck. Neither the longspurs nor the total of 4684 White-throated Sparrows is considered unusual. [Thorough and indisputable details supplied for all unusual records.—HL]—J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

PIEDMONT

RALEIGH, N.C. (center: Norfolk and Southern RR crossing on Lake Wheeler Road).

20 December. Raleigh tallied over 100 species for the second consecutive year, this year's total being three more than the 101 in 1974. *Bluebird* numbers were high relative to previous years while *American Robins* were noticeably scarce. The *Green Heron* was next to the causeway at Lake Wheeler and was observed by Margaret Hobgood, Jill Berninger, Kevin Hintsa, and Chris Marsh. Marsh and his party also found the *American Bittern*, *Northern Shoveler*, and *Least Sandpipers* in the Lake Wheeler area. The Compiler flushed one *Virginia Rail* and heard another in response to a taped call at Lake Benson; two birds (perhaps the same birds as on the count) were found there 2 weeks before the count. The *Long-billed Marsh Wren* was seen in a cattail-shrub marsh near Yates' Pond by John Fussell, Harry LeGrand, and Merrill Lynch; the call note was heard and the streaked back and white eye-stripe were seen well. *Solitary Vireo* (Will Post) was at Yates' Pond among a group of small birds that responded to an imitation of Screech Owl calls. The *Orange-crowned Warbler* was at Ann Bent's feeder in Raleigh for several weeks prior to the count, and it was seen on and after count day by many birders. All field marks and creeping habit of the *Black-and-white Warbler* were noted by George Hervey. Fussell found the *Prairie Warbler* in young pines along the edge of Lake Wheeler; he saw the tail-wagging, side streaking, typical face pattern, and light belly and breast. Four *Bonaparte's Gulls* (Harry and Edmund LeGrand, Ray Winstead) were at Lake Wheeler on the day before the count, and three *Turkeys* were seen by Nelson Chadwick at Umstead State Park the day after the count. By far the most unusual sighting was the *White-winged Crossbill* (probably a female) seen by Mike Browne at his parents' feeder on 17 December. It was with several Purple Finches, and the crossed mandibles and white wing bars were noted at close range. This is the second record for the species in Wake County, the first having occurred in 1907. [Good details for the many noteworthy species seen on the count.—HL]—R.J. HADER, 3313 Cheswick Drive, Raleigh, N.C. 27609.

DURHAM, N.C. (center: 1 mile N and 1 mile E of junction of Eno River and US 501).

21 December. The *Solitary Vireo* (Mark Huff, John Horn) was seen at 10 meters and also was seen 2 days before the count. *Black-and-white Warbler* (John and Nancy Spahr) was creeping on trees along the Eno River. The Compiler had the *Dark-eyed Junco X White-throated Sparrow* hybrid at his feeder with a large flock of White-throated Sparrows. This is almost undoubtedly the same bird that frequented his feeder last winter. [Neat report with excellent details.—HL]—NORMAN BUDNITZ, Department of Zoology, Duke University, Durham, N.C. 27706.

CHAPEL HILL, N.C. (center: intersection of Columbia and Franklin Streets in Chapel Hill).

4 January. The Chapel Hill area seems to be attracting more waterfowl in recent years, especially at Eastwood Lake, a residential lake in town. Probable reasons for the increase are the cleaning up of this once polluted lake and the feeding of grain to domestic Canada Geese and domestic ducks that attract other waterfowl. *Horned Grebe* was on Eastwood Lake, first found several days before the count by Angelo Capparella and Stanley Alford. The *American Wigeon* (Compiler, Ida Lee Winkler) was also on Eastwood Lake. The adult *Black-crowned Night Heron* (Deane McGinnis) was seen in a marsh along NC 54 about 1.5 miles E of Chapel Hill at 07:30. The black crown, solid white underparts, and short legs were seen clearly. All 45 *Black Vultures*

were at one roost. The two *Yellow-throated Warblers* had been at Ruth McLean's feeder all winter and were confirmed by Bill Wagner. Interestingly, the Compiler had seen an individual of this species at a neighbor's feeder on 9 February 1975, and it was seen both before and after that date during the winter. Also, Robin Carter saw a Yellow-throated Warbler in the vicinity in December 1975. [Good details for the above species.—HL]—BARBARA ROTH, 7 Lone Pine Road, Chapel Hill, N.C. 27514.

ROCKINGHAM COUNTY, N.C. (center: Rockingham Community College Student Center).

21 December. *Red Crossbills* were reported by two parties. The absence of *Eastern Phoebes* on the count was surprising. [The Compiler submitted statistics from the count showing the value of using tape recordings of Screech Owl calls to attract songbirds. The interesting results from his study would make a good field note for *Chat.*—HL]—EDWARD BURROUGHS, 921 Seymour Court, Eden, N.C. 27288.

GREENSBORO, N.C. (center: Radio Station WBIG transmitter tower).

3 January. The weather (overcast with moderate rain in the morning) kept many birds and birders under cover through much of the day. There would not have been a high count on individual birds if it had not been for the large blackbird roost in the count area.—DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N.C. 27408.

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Parkway).

3 January. The 91 species surpasses the previous high of 88 in 1973. The *Common Mergansers* (Fran Baldwin, Quincey Stoker) were females seen at close range on Salem Lake. Single *Green Herons* were found at two locations on count day: at Mallard Lake in Tanglewood Park Paul Spain saw one that had been seen since 20 December, and the other was at Conrad Lake (Louise Gossett, Sue Moore, Ann Pollard). There were two separate sightings of *Gray Catbirds* (Kevin Hintsa, Ramona Snavely). An unusually high number of *Water Pipits* were at the Sewage Treatment Plant. *White-crowned Sparrows* continue to increase in numbers in the Winston-Salem area. [Excellent details for unusual sightings.—HL]—RAMONA SNAVELY, 115 Plymouth Avenue, Winston-Salem, N.C. 27104, and FRAN M. BALDWIN, 1030 Englewood Drive, Winston-Salem, N.C. 27106.

IREDELL COUNTY, N.C. (center: South Yadkin River bridge on Chipley Ford Road).

4 January. Although the count day was very cold and windy, the results were fairly good. *Rufous-sided Towhees* seemed to be scarce, but more than the normal numbers of hawks, vultures, and woodpeckers were counted. The *Broad-winged Hawk* was seen by Frank Sherrill near the Statesville Arts and Science Museum, where it is seen year-round. The Compiler saw the bird at this location during the count period but not on count day. Lois Goforth reported the *House Wren.*—JANE S. MULLEN, 4125 Camelot Drive, Apt. A-3, Raleigh, N.C. 27609.

STANLY COUNTY, N.C. (center: 2 miles W of Badin at main crossroad in Palestine).

20 December. Barrett Crook and Harold Morris saw the two *Red-throated Loons* at close range on Badin Lake; the upturned bill and gray back were visible on the birds. They also saw the 23 *Horned Grebes* and remarkable *seven Ospreys* at Badin Lake. *Saw-whet Owl* was heard by Naomi Goforth at the Girl Scout camp, where the species has been seen and heard consistently by experienced birders on Christmas and Spring counts for several years. The *Red Crossbills* (Vera Crook) were observed at close range on top of Morrow Mountain.—DAVID BURNEY, Route 2, Box 211, Albemarle, N.C. 28001.

CHARLOTTE, N.C. (center: intersection of South Boulevard and Woodlawn Road).

27 December. The *Horned Grebe* (Flo Cobey and party) was seen at Creech's

Pond in northeastern York County, S.C. For the second consecutive year the *Hermit Thrush* was missed. Refuse disposal by landfills and ever increasing urbanization seem to have all but eliminated the vultures in the area. The northern finch invasion here has been almost nil in spite of predictions for a favorable year.—BECKY and JOE NORWOOD, 1329 Goodwin Avenue, Charlotte, N.C. 28205.

GREENVILLE, S.C. (center: intersection of highways 291 and 29).
27 December.—ROSA LEE HARDIN, Star Route, Cleveland, S.C. 29635.

NORTH WILKESBORO, N.C. (center: North Wilkesboro).
1 January. [Because only 21 species and 118 individual birds were reported, it would be of no value to list each species and the respective totals. Noteworthy species were a *Long-eared Owl* and a *House Finch*.—HL]. 2 field observers in 1 party; 9 field-hours; 10 miles by foot; 16 miles by car. Louise and Wendell Smith.—WENDELL P. SMITH, 911 E Street, North Wilkesboro, N.C. 28659.

CALDWELL COUNTY, N.C. (center: Lenoir).
29 December.—HELEN E. MYERS, 310 Beall Street NW, Lenoir, N.C. 28645.

MOUNTAINS

TRYON, N.C. (center: Tryon RR Station).
29 December. On 2 January 1976 several observers censused a blackbird roost at Route 108 and Howard Gap Road. Approximately 450,000 birds were seen, including Common Grackles, Starlings, Rusty Blackbirds, Brown-headed Cowbirds, and probably a few Red-winged Blackbirds. [Why wasn't the roost censused on count day?—HL]—MARGARET P. SKELTON, Forest Avenue, Route 2, Landrum, S.C. 29356.

BREVARD, N.C. (center: 5 miles SE of Brevard at Rich Mountain Lookout Tower).
27 December. The *Great Blue Heron* and *Bufflehead* (Ercel and George Francis) were found at Reasonover Lake, at 3000 feet elevation. *Wood Duck* was on one of the large lakes at nearby Sherwood Forest. *Pied-billed Grebes* were found in the open portion of a large lake at Camp Carolina, in the valley within Brevard. The two *Tree Sparrows* were seen by Lynn Hiller and Lydia Barrett in a brushy area near a stream; field marks noted were rusty cap and clear breast with one dark spot. The 54 *Killdeers* were high, but in low numbers were *American Robin, both kinglets,* and *Pine Siskin*; *Cedar Waxwings* and *Common Grackles* were totally missed. The total number of all birds was the lowest ever. [The Compiler submitted a very informative summary of the four-year count totals.—HL]—WALTER C. HOLLAND JR., 290 Maple Street, Brevard, N.C. 28712.

BUNCOMBE COUNTY, N.C. (center: intersection of US 70 and SR 2740 in Swannanoa).
3 January.—ROBERT RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

AVERY COUNTY, N.C. (center: entrance to Grandfather Mountain toll road).
3 January. Roland Sargent identified the three *Common Redpolls* in flight by small finch size and call note. [The 29 *Black-capped Chickadees* counted on Beech Mountain, where 16 Carolina Chickadees also were counted, have been deleted because no details were reported. I do not rule out the possibility that the Black-capped may winter in the higher mountains in ranges away from the breeding grounds, as the species is partially migratory to the north of North Carolina; but without strongly supporting details, records from such areas cannot be accepted.—HL]—MARGERY PLYMIRE, Box 306, Linville, N.C. 28646.

FIELD OBSERVERS

BODIE-PEA ISLAND, N.C.: Robert Anderson, Mike Boatwright, Ray Chandler, Charles Cremeans, Keith Fielder, Charles Gibson, Clay Gifford, Sam Gifford, Tom Gwynn, Robert Hader, Joseph Hudick, Kent Ihrman, Wayne Irvin, Kenneth John, Ken Knapp, Karla and Palmer Lawler, Edmund LeGrand, Harry LeGrand, Paul McQuarry, Lynn Messinger, Norman Messinger, Jack and Virginia Overman, Dwight Peake, Richard Peake Jr., Bill Portlock, Doug Pratt, Don Schwab, Paul Spain, Paul Sykes Jr., Robert Teulings, Mike Tove, Robert Tripican, David Warner, Jim Warner, Bill Williams, Gary Williamson, John Williamson, Townley Wolfe.

MOREHEAD CITY, N.C.: John Fussell II, John Fussell III, Kevin Hintsa, Edmund LeGrand, Harry LeGrand, Charles Lincoln, Merrill Lynch, Chris Marsh, Lisa Marsh, Barbara Pugh, Anne and Bruce Reynolds, McDuff Wade, Ray Winstead.

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AIKEN, S.C.: Jeannine Angerman, Jack Cooper, J. Fred Denton, Will Post, Jim Reinig, Tom Rial, Walter Scott.

ROANOKE RAPIDS, N.C.: Ricky Davis, Fenton Day, Keith Fielder, John Fussell, Robert Hader, Tom Howard, David and Ken Knapp, Harry LeGrand, Merrill Lynch, Chris Marsh, Paul McQuarry, Louise Parker, Eloise Potter, Barbara Pugh, Katherine Rice.

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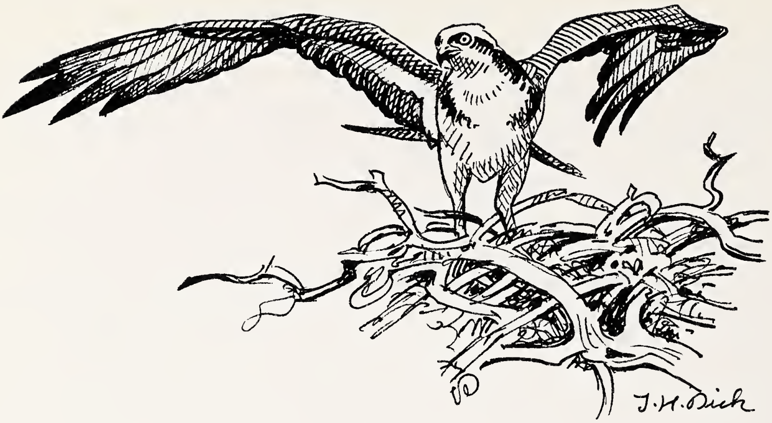

General Field Notes

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An Eared Grebe Collected in North Carolina

MICOU M. BROWNE
North Carolina State Museum of Natural History
Box 27647, Raleigh, N.C. 27611
4 August 1975

On 30 December 1971, I picked up a female Eared Grebe (*Podiceps nigricollis*) on the beach at Oregon Inlet, Dare County, N.C. It had been dead for a number of days, and apparently had been shot. The specimen was deposited in the bird collections at the North Carolina State Museum of Natural History (No. 4431), and its identification has been confirmed by Roxie C. Layborne of the U.S. National Museum of Natural History.

Broad-winged Hawks at Pea Island N.W.R.

RICKY DAVIS
P.O. Box 277, Zebulon, N.C. 27597
June 1975

While birding at the Pea Island National Wildlife Refuge in northeastern North Carolina on 24 May 1975, I saw 13 Broad-winged Hawks (*Buteo platypterus*). I watched the Broad-wings for 10 to 15 minutes from the southern observation platform overlooking North Pond. The birds were soaring southward in slow circles at different heights. I studied the birds with 7X binoculars and 30X scope and carefully noted the determining field marks of a broadly barred tail and small and stubby shape.

I can find no evidence of Broad-winged Hawks on the North Carolina Outer Banks either from the Pea Island list maintained by the Refuge personnel or from *The Chat*.

Apparent Nesting of Red-breasted Nuthatches in Rockingham County, N.C.

EDWARD BURROUGHS
921 Seymour Court
Eden, N.C. 27288

28 July 1975

I began keeping notes on the presence of a pair of Red-breasted Nuthatches (*Sitta canadensis*) on 9 March 1975 to establish departure dates for that species in Rockingham County, N.C. The locality was a wooded residential section in the city limits of Eden. The trees are predominately mature Virginia pine (*Pinus virginiana*).

My note of 9 March reads, "Pair of Red-breasted Nuthatches inspecting bird houses in back yard." Notes from 17 March through 4 June indicate sightings of single birds. During this period sunflower seeds were the only food taken from my feeders, and there was very little interest shown in them; generally a few seeds would be taken late in the afternoon. On 23 and 24 May I noticed a great deal of feeder activity. A Red-breasted Nuthatch would come to the feeder, take a sunflower seed, then hide it in either a cone or the bark of a pine tree. I saw about 20 of these feeding forays in a period of about 30 minutes. The preferred food during all of my observations was pine seeds. The cone crop had been heavy and obviously met the needs of the birds.

On 5 June I saw two individuals. On this day I constructed three log type bird houses and placed them in my yard. The next day a pair came to my feeder again. They fed sparingly and left. I made a point of staying outside whenever I had the chance, for I was now hopeful that I would see them select one of my bird houses and nest here. The following day, 7 June, two of the birds came to a pine adjacent to the feeder. One of the birds took a seed from the feeder, flew to the limb where the other bird was perched, cracked the seed open, and fed the other bird. I watched through 9X binoculars from a distance of about 25 feet. The bird being fed had a definite downy appearance. It fluttered its wings and assumed a position low on the limb to receive a portion of the seed from the other bird. It was obviously an immature bird. This activity was observed every day until 13 June. On that day there was no activity at my feeder. I heard calls of a Red-breasted Nuthatch from my front yard and went there to investigate. I saw three individuals on one limb of a tree, and heard another calling from the top of another tree.

From 14 June through 1 July I recorded only intermittent sightings, generally of a single bird. A search of all available references gives no indication of any previous nesting record for North Carolina outside the mountain regions. *Birds of North Carolina* (1959 revision) gives the range of this species as "Whole state irregularly in winter, resident on some of the higher mountains where it breeds."

Although I was unable to locate the nest hole of these Red-breasted Nuthatches, the period covered by my observations (9 March through 1 July) plus the sighting of an immature bird from 7 June through 1 July, leads me to believe that a pair of Red-breasted Nuthatches had a successful nesting in Rockingham County in 1975.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates 1975)

COMMON LOON: An impressive flight of 110 was seen moving past Mercer's Pier at Wrightsville Beach, N.C., on the morning of 18 November by Robert Hader. An early sighting of an individual in breeding plumage was noted on 8 August at Manns Harbor, N.C., by John Souther.

HORNED GREBE: One was very early at Charleston, S.C., on 3 August, observed by Ted Beckett.

RED-NECKED GREBE: One was seen in the company of Horned Grebes in Pamlico Sound near the Ocracoke Island, N.C., Coast Guard Station on 30 November by Richard Rowlett.

CORY'S SHEARWATER: Several cruise parties found this species common in Gulf Stream waters off the North Carolina coast during September and October with a high count of 138 recorded off Cape Hatteras on 26 October by Paul DuMont.

AUDUBON'S SHEARWATER: A good count of 48 was recorded during a pelagic cruise to the edge of the continental shelf 50 miles SE of Cape Lookout, N.C., on 7 September by James Mattocks and party. On 26 October several were seen off Cape Hatteras, N.C., by Paul DuMont.

LEACH'S STORM-PETREL: One was seen during an offshore cruise 23 miles SSE of Hatteras Inlet, N.C., on 26 October by Paul DuMont.

WILSON'S STORM-PETREL: An estimated 350 were observed by Bill Williams in Gulf Stream waters off Oregon Inlet, N.C., on 7 September.

WHITE PELICAN: One was an unexpected find at Beaufort, N.C., on 2 August by Eugene Pond.

GANNET: An estimated 1500 were seen feeding near shore along the beaches of Bodie Island and Pea Island on North Carolina's Outer Banks on 29 November by Adrian Dignan.

DOUBLE-CRESTED CORMORANT: A massive flight of over 20,000 migrating cormorants was seen moving past Ocracoke Island, N.C., during the early daylight hours of 30 November by Richard Rowlett. Thousands were present also in the Charleston, S.C., area on the same date as reported by Perry Nugent.

GREAT EGRET: Locally uncommon inland sightings of one to five individuals were recorded in the vicinity of Louisburg, N.C., during the first 2 weeks of August by Eloise Potter. These occurrences highlighted reports of post-breeding dispersal into the North Carolina piedmont as far westward as Winston-Salem.

LOUISIANA HERON: One was seen at Moore's Pond in Franklin County, N.C., on 1 September by Eloise Potter, a first record for the county. Several were noted in the Raleigh, N.C., area during August and early September by various observers, and three were found at Roanoke Rapids Lake near Vultare, N.C., on 3 August by Merrill Lynch.

BLACK-CROWNED NIGHT HERON: An adult and immature were locally uncommon fall visitors at Lake Wheeler near Raleigh, N.C., sighted on 3 November and 9 November, respectively, by James Mulholland.

LEAST BITTERN: Piedmont occurrences were noted at Townville, S.C., where an individual was flushed on 9 August by Harry LeGrand, and at Winston-Salem, N.C., where a single bird was seen at the city sewage treatment plant on 12 and 13 September by Fran Baldwin and Ramona Snavely.

WOOD STORK: Fifty were observed at Magnolia Gardens near Charleston, S.C., on 15 August by Ted Beckett.

GLOSSY IBIS: An estimated 200 were seen in a single flock at Pea Island N.W.R. on 22 September by James Pullman. Inland, an individual was seen on 11 September at Goose Creek State Park near Washington, N.C., by David Burney and Robert Teulings; and a lingering flock of 7 to 9 birds was present at Sumter, S.C., during the month of September, reported by Evelyn Dabbs.

BRANT: A flock of 800 was seen in Pamlico Sound between Ocracoke and Portsmouth Islands, N.C., on 30 November by Richard Rowlett.

EUROPEAN WIGEON: One was noted at Pea Island N.W.R. on 10 October by James Pullman and was later reported by other observers.

REDHEAD: A peak fall census of 7000 was recorded during the last week of November at Pea Island N.W.R. by Jack Hagan, assistant refuge manager.

CANVASBACK: Observers noted good numbers in the North Carolina coastal area during the fall season, with an estimated 7000 present at Pea Island N.W.R. in late November, reported by Jack Hagan.

BUFFLEHEAD: A very early fall sighting of two was recorded on 3 August at Charleston, S.C., by Ted Beckett.

COMMON EIDER: A subadult male and two birds in female plumage were found at Cape Point on Hatteras Island, N.C., 27 October by Paul DuMont. Bill features were closely observed.

COMMON MERGANSER: Two were seen at Oregon Inlet, N.C., on 30 November by Robin Carter et al. Inland, three were found at Lake Wheeler near Raleigh, N.C., on 23 November by Ken Knapp.

MISSISSIPPI KITE: Twenty-three were counted along the Pee Dee River in Anson County, N.C., and Chesterfield County, S.C., on 3 August by Robin Carter and party.

SHARP-SHINNED HAWK: Coastal observers noted several strong flights at Fort Macon, N.C., and along the Outer Banks during the period 3-25 October. A conspicuous flight of over 150 migrants was seen passing over Interstate 95 in southern South Carolina in the vicinity of Ridgeland by John Wall on 12 October.

COOPER'S HAWK: A flight of 134 was recorded during a one hour period at Ocracoke Island, N.C., on 6 October by Elizabeth Ball.

BROAD-WINGED HAWK: Good numbers were seen in the Clemson, S.C., area during fall migration with major flights noted on 14 September by Harry LeGrand and 4 October by Sidney Gauthreaux.

ROUGH-LEGGED HAWK: Two individuals, both in dark-phase plumage, were seen at Braswell's Farm near Rocky Mount, N.C., on 28 November by Louis Fink.

BALD EAGLE: An immature was seen at Lake Hartwell near Clemson, S.C., on 2 August and another sighting of perhaps the same bird was recorded there on 30 September (LeGrand and Gauthreaux). Elsewhere, another immature was seen at Roanoke Rapids Lake in the vicinity of Vultare, N.C., on 3 August; and it lingered there through November (Lynch). Other observers noted an adult near Winston-Salem, N.C., on 12 September (Baldwin and Snavely); and another Bald Eagle was seen at Durham, N.C., on 12 October (Norman Budnitz). There were also reports of individuals seen in the coastal area at Lake Mattamuskeet, Morehead City, McClellanville, and Charleston during the fall season.

OSPREY: Twenty-one migrants were tallied during a two-hour period at Sullivan's Island, S.C., on 28 September by Sidney Gauthreaux and Palmer Krantz.

PEREGRINE FALCON: Sightings of at least 34 individuals were recorded along the coast of the Carolinas from late September through November. Inland, a Peregrine was seen near Raleigh, N.C., on 1 November by David Lee.

MERLIN: Reports indicated an unusually strong fall flight of this species with more than 40 observations reported from a dozen coastal and inland locations.

KING RAIL: One was seen out of its normal habitat on a busy downtown street in Winston-Salem on 6 September by Sebastian Sommer.

CLAPPER RAIL: One was taken by a hunter at Townville, S.C., on 13 September, far inland from its normal coastal locale. The specimen was examined and identified by Sidney Gauthreaux, confirming an apparent first record for the piedmont section of South Carolina.

SORA: One was an early find inland at Townville, S.C., on 2 August by Harry LeGrand.

BLACK RAIL: Single birds, responding to tape recorded calls, were heard on 3 September and 12 October at Cedar Island N.W.R., Carteret County, N.C., by John Fussell.

COMMON GALLINULE: One was a late and unusual inland fall visitor at Salem Lake near Winston-Salem, N.C., on 11 November, observed by Fran Baldwin and Ramona Snavely.

AMERICAN COOT: Over 3000 were seen at Lake Wheeler near Raleigh, N.C., on 12 November by Merrill Lynch.

AMERICAN GOLDEN PLOVER: One was a lingering fall visitor from late October through November at Cape Point on Hatteras Island, N.C., seen by Joe Hudick and others.

RUDDY TURNSTONE: A rare inland occurrence of a single bird was noted at Lake Surf near Vass, N.C., in Moore County on 31 August by Jay Carter and Jill Berninger.

LONG-BILLED CURLEW: A fall visitor was present at Bird Shoal near Morehead City, N.C., from early August through mid-October, fide John Fussell. Another was present at Oregon Inlet on the North Carolina Outer Banks from 29 August through 11 October, seen by many observers.

WHIMBREL: A late lingerer was seen 25 November on the Outer Banks at Frisco, N.C., by Joe Hudick.

UPLAND SANDPIPER: Three were found on 30 August at the Beaufort, N.C., airport by John Fussell.

SPOTTED SANDPIPER: A late sighting was recorded near Raleigh, N.C., where a single bird was seen at Greenview Farm on 14 November by James Mulholland.

WILLET: Two were seen inland at Roanoke Rapids Lake near Vultare, N.C., on 3 August by Merrill Lynch.

RED KNOT: Good counts of an estimated 300 were noted on the Outer Banks at Frisco, N.C., on 23 November by Joe Hudick and 950 at the southern end of Ocracoke Island on 30 November by Richard Rowlett.

PURPLE SANDPIPER: Flocks of 150 to 200 were present on the Charleston Harbor jetties on 9 and 16 November, observed by Ted Beckett, Stan Langston, and Susan Roche. These are record counts for the species in the Carolinas.

PECTORAL SANDPIPER: A late inland transient was seen at Greenview Farm near Raleigh, N.C., on 18 November by James Mulholland.

BUFF-BREASTED SANDPIPER: Scattered sightings, mostly of single birds, were recorded along the Outer Banks by various observers from late August through September. Elsewhere along the coast, five were seen on Shackleford Bank near Beaufort, N.C., on 27 August by Henry Rankin and two on 31 August at Huntington Beach, S.C., by John Cely. Individuals were also found inland at Raleigh, N.C., on 31 August by Chris Marsh; at Clemson, S.C., on 25 September by Harry LeGrand; and near Florence, S.C., on 12 October by John Wall.

BAIRD'S SANDPIPER: Four were seen at Winston-Salem, N.C., at the city's sewage treatment plant on 8 September as reported by Ramona Snavely. Individuals were found also on the Outer Banks at Pea Island N.W.R. and Cape Point on 27 October by Paul DuMont.

LONG-BILLED DOWITCHER: An estimated 160 were seen in a flock at Bodie Island, N.C., on 25 October by Paul DuMont.

WHITE-RUMPED SANDPIPER: One was an uncommon inland visitor at the Winston-Salem sewage treatment plant on 25 August, observed by Fran Baldwin, Wayne Irvin, and Ramona Snavely.

HUDSONIAN GODWIT: On the Outer Banks up to six were seen in North Pond at Pea Island N.W.R. in early October by various observers, and eleven were seen later at Bodie Island on 25 October by Paul DuMont.

NORTHERN PHALAROPE: Sightings were noted by several cruise parties off Cape Hatteras, N.C., during the fall season, highlighted by a count of 70 on 12 October reported by Richard Rowlett.

RED PHALAROPE: A few were seen by observers in waters off Cape Hatteras, N.C., during September and October, and an injured bird was found at Ocracoke Island, N.C., on 29 November by Richard Rowlett (specimen to U.S. National Museum).

WILSON'S PHALAROPE: An early fall migrant was seen in North River Marsh near Morehead City, N.C., on 13 August by John Fussell. Inland, one was found at Raleigh, N.C., on 6 September by Ricky Davis and Chris Marsh.

GREAT BLACK-BACKED GULL: One was seen near Bunn, N.C., in Franklin County on 30 October by Eloise Potter, an unusual inland record.

LESSER BLACK-BACKED GULL: One was seen at Cape Point on Hatteras Island, N.C., on 27 October by Paul DuMont.

BLACK-LEGGED KITTIWAKE: An individual in adult plumage was seen on 17 November at Wrightsville Beach, N.C., by Robert Hader. An immature was seen at Cape Point, Hatteras Island, N.C., on 28 November by Richard Rowlett.

FORSTER'S TERN: Over 3000 were massed at Cape Point on Hatteras Island, N.C., on 29 November, observed by Richard Rowlett.

COMMON TERN: Uncommon inland sightings of 20 were noted at High Rock Lake in Davidson County, N.C., on 13 September by Jerry Shiffert; nine at Salem Lake near Winston-Salem, N.C., on 24 September by Charles Frost and James Orgain; and seven at Lake Hartwell near Clemson, S.C., on 27 September by Harry LeGrand. Another inland transient was recorded at Raleigh, N.C., on 26 September by James Mulholland.

SOOTY TERN: Two were seen offshore 50 miles SE of Cape Lookout, N.C., on 7 September by James Mattocks and party.

BRIDLED TERN: An unprecedented 57 were seen during a pelagic cruise to Gulf Stream waters off Cape Hatteras, N.C., on 31 August by Robert Ake and party.

SANDWICH TERN: A late occurrence of 15 was noted at Cape Point, Hatteras Island, N.C., on 28 November by Joe Hudick.

CASPIAN TERN: An early appearance of two was noted at Charleston, S.C., on 3 August by Ted Beckett. Two inland transients were seen at Roanoke Rapids Lake near Roanoke Rapids, N.C., on 21 August by Merrill Lynch; and one was found at Seaforth Lake in Chatham County, N.C., on 8 September by Robin Carter.

BLACK TERN: A flock of over 1000 was seen at Bird Shoal near Morehead City, N.C., on 17 August by John Fussell; and a very late sighting of three was recorded at Hatteras Island, N.C., on 27 October by Paul DuMont.

RAZORBILL: One was seen at Hatteras Inlet on the North Carolina Outer Banks on 16 November by Joe Hudick.

WESTERN KINGBIRD: Seven transients were seen along the Outer Banks by various observers between late September and late October. Single birds were found inland at Southern Pines, N.C., on 3 October by Jay Carter, and at Raleigh, N.C., on 13 October by James Mulholland.

SCISSOR-TAILED FLYCATCHER: One was observed and photographed at Ocracoke Island, N.C., on 23 October by Richard Rowlett.

EASTERN WOOD PEWEE: One was banded on the late date of 9 November at Raleigh, N.C., by Mike Browne.

OLIVE-SIDED FLYCATCHER: One was an uncommon fall transient on 29 August at Southern Pines, N.C., observed by Jay Carter. Other individuals were seen in the Chapel Hill, N.C., area on 13 September by Mrs. Paul S. Payne and on 8 October by Robin Carter.

BANK SWALLOW: An estimated 250 were noted on wires at Townville, S.C., on 7 September by Harry LeGrand.

COMMON RAVEN: Two were seen at Table Rock Mountain, Pickens County, S.C., on 25 October by John Cely.

BLACK-CAPPED CHICKADEE: Robert Beason and Harry LeGrand noted this species along the Blue Ridge Parkway between Richland Balsam and Beech Gap in the North Carolina mountains on 16 August. Fourteen individuals were tallied by call and song.

RED-BREASTED NUTHATCH: One was seen at Raleigh, N.C., on 25 August by Gail Whitehurst, an unusually early fall appearance in the piedmont.

LONG-BILLED MARSH WREN: A late inland transient was noted at Clemson, S.C., on 17 November by Harry LeGrand.

SHORT-BILLED MARSH WREN: One was late and unusual at Clemson, S.C., on 10 November, observed by Harry LeGrand.

GRAY-CHEEKED THRUSH: A late migrant was noted at North Wilkesboro, N.C., on 17 November by Wendell Smith.

WATER PIPIT: An unusually early individual was found at Seaforth Lake in Chatham County, N.C., on 31 August by Robin Carter et al.

PHILADELPHIA VIREO: Fall sightings of single migrants were recorded on 15 September near Hillsborough, N.C., by Robin Carter; on 27 September at Lake Surf near Vass, N.C., by Jay Carter; on 4 October near Clemson, S.C., by Sidney Gauthreaux and Frank Moore; on 6 October at Raleigh, N.C., by Jim Mulholland; and on 13 October at Reidsville, N.C., by Pete Yount.

BLUE-WINGED WARBLER: As many as six were seen on 20 September and two on 21 September at Hanging Rock Mountain in Watauga County, N.C., by Phil Crutchfield.

TENNESSEE WARBLER: A late individual was noted on 8 November at Clemson, S.C., by Harry LeGrand.

ORANGE-CROWNED WARBLER: One was banded at Raleigh, N.C., on 29 November by Mike Browne.

NORTHERN PARULA: A 9 November sighting was recorded at Clemson, S.C., by Harry LeGrand.

CAPE MAY WARBLER: Two were late fall visitors at Raleigh, N.C., on 21 November, observed by Kevin Hintsa.

BLACK-THROATED BLUE WARBLER: A late transient was found at Winston-Salem, N.C., on 11 November by Ruth Hill.

OVENBIRD: A late lingerer was seen on 15 November at Carolina Sandhills N.W.R. in Chesterfield County, S.C., by Robin Carter.

KENTUCKY WARBLER: One was late at North Wilkesboro, N.C., on 3 November, observed by Wendell Smith.

CONNECTICUT WARBLER: A single transient was seen near Little Switzerland in McDowell County, N.C., on 11 September by Elizabeth Ball, and another on the coast at Pea Island N.W.R. on 8 October by James Pullman and Elizabeth Teulings.

MOURNING WARBLER: Single birds were noted as rare fall transients at Chapel Hill, N.C., on 20 September by Robert Teulings, and at Clemson, S.C., on 4 October by Harry LeGrand.

WILSON'S WARBLER: One was a late and uncommon fall visitor at Raleigh, N.C., observed on 2 November by James Mulholland.

YELLOW-HEADED BLACKBIRD: A female was seen on 12 September at Ocean Isle Beach, N.C., by Norwood Middleton, and a male near Louisburg, N.C., on 1 November by Eloise Potter.

BREWER'S BLACKBIRD: One was seen in the Charleston, S.C., area at Magnolia Gardens on 15 November by Ted Beckett. Elsewhere, a flock of 15 was seen near Townville, S.C., on 27 November by Harry LeGrand.

BLACK-HEADED GROSBEAK: An adult male was seen well near Duck, N.C., on 25 October by Paul DuMont.

HOUSE FINCH: Three were identified at Swannanoa in Buncombe County, N.C., on 25 October by Robert Ruiz, a first record for that western locality. Elsewhere, winter visitors were present at Winston-Salem, N.C., as early as 6 October, reported by Ramona Snavely.

RED CROSSBILL: A small flock was seen at Southern Pines, N.C., on 29 October by Jay Carter.

LARK SPARROW: One was a feeder visitor at Pawleys Island, S.C., from mid-September through early October (F.M. Probst); and another was seen at Ocracoke Island, N.C., on 15 October by Richard Rowlett.

LAPLAND LONGSPUR: Two coastal sightings were reported from the Outer Banks where an individual was found near the Hatteras Lighthouse on 11 October by David Lee and two birds were seen at Ocracoke Island on 25 October by Richard Rowlett.

Carolina Bird Club
INC.

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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from State and Federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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OUR COVER—Fred L. Johns photographed the downy Least Tern chick in the "freezing" position at a colony near Salter Path, N.C. The Black-throated Green Warbler on page 62 is reprinted from the March 1968 *Chat* cover drawing by Doug Pratt, whose recent accomplishments include art work for the new edition of *Louisiana Birds.*

BIRDS OF THE PLOTT BALSAM MOUNTAINS OF NORTH CAROLINA

MARCUS B. SIMPSON JR.

The lofty Plott Balsam Mountains of western North Carolina are one of the most rugged, wild, and scenic mountain ranges in the southern Appalachians. Although largely unexplored ornithologically until recent years, the range is covered by a wide variety of plant communities inhabited by a rich and diversified avifauna. This paper provides an annotated checklist of bird species and brief ecological and vegetational data as a baseline for future studies in the region.

GEOMORPHOLOGY

Transecting the Great Balsam Mountains at right angles, the Plott Balsams rise abruptly from the valleys of the Tuckasegee and Pigeon Rivers of western Jackson and Haywood Counties, N.C., at 35° 28′ N and 83° 8′ W (Waterrock Knob, Fig. 1). Beginning approximately 9 km E of the confluence of the Tuckasegee and Oconaluftee Rivers, the range extends in an ENE direction for 28 km to its terminus just NW of Waynesville. For almost half its length, the main crest lies above 1500 m*, with major peaks including Bald Mountain (1646 m), Blackrock Mountain (1771 m), Yellow Face (1839 m), Waterrock Knob (1918 m), Lickstone (1700 m), Jones Knob (1902 m), Old Field Top (1768 m), Plott Balsam (1956 m), and Eaglenest Mountain (1506 m). Scott Creek, Richland Creek, the Tuckasegee River, and Balsam Gap form the southern boundary, while Soco Gap, Soco Creek, and Jonathan's Creek separate the range from the northern Great Balsams. The Blue Ridge Parkway crosses the main crest from Balsam Gap (1024 m), to Waterrock Knob and on to Soco Gap (1324 m), providing the only convenient access to the higher elevations. The coves and valleys below 1000 m are extensively settled and accessible by a network of major and secondary highways.

CLIMATE

Although no climate data are available for the higher elevations, conditions probably resemble those at Mt. Mitchell (see Simpson 1972) with cool temperatures, moderate to heavy rainfall, and frequent fog during the summer, while freezing temperatures, heavy snowfall and ice, and high winds prevail during the winter.

VEGETATION

During the past 100 years, the vegetation of the Plott Balsam Mountains has been altered markedly by fires, logging, agriculture, and human settlement—resulting in a complex mosaic of successional, climax, and disclimax communities. Although no studies have dealt exclusively with the vegetation of the range, the data of Ramseur (1960) and Stupka (1964), Whittaker's (1956) detailed study from the adjacent Great Smoky Mountains, and my notes from the present study provide the following descriptive classification of major plant community-types in the Plott Balsam Mountains. Extensive botanical work remains to be done in analyzing and classifying the vegetation of the range.

Spruce-fir Forests

Once covering much of the terrain above 1400 m, forests dominated by red spruce (*Picea rubens*) and Fraser fir (*Abies fraseri*) have been reduced by fires and logging. Other canopy trees include mountain ash (*Sorbus americana*), fire cherry (*Prunus pensylvanica*), mountain maple (*Acer spicatum*), striped maple (*A. pensylvanicum*), and yellow birch (*Betula alleghaniensis*). Understory shrubs include Canada blackberry (*Rubus canadensis*), red-berried elder (*Sambucus pubens*), mountain cranberry (*Vaccinium erythrocarpum*), hobblebush (*Viburnum alnifolium*), and the seedlings of canopy species.

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*For rough conversion of meters to feet, multiply elevations by 3 (1500 m x 3 = about 4500 feet). For accurate conversion, multiply by 3.048 (1500 m x 3.048 = 4572 feet).

Northern Hardwood Forests

Forests dominated by beech (*Fagus grandifolia*), and yellow birch occur at elevations above 1350 m, often along the lower border of the spruce-fir community. Other canopy trees include the sugar maple (*A. saccharum*), red maple (*A. rubrum*), yellow buckeye (*Aesculus octandra*), striped maple, mountain maple, fire cherry, and serviceberry (*Amelanchier laevis*), while the shrub layer includes canopy species seedlings, rosebay rhododendron (*Rhododendron maximum*), Catawba rhododendron (*R. catawbiense*), dog-hobble (*Leucothoe fontanesiana*), hydrangea (*Hydrangea arborescens*), and hobblebush.

Grass Balds

On some peaks and exposed slopes above 1500 m, forest and shrub communities are absent and the terrain is covered by open expanses of grass bald dominated usually by mountain oat grass (*Danothoria compressa*). Often the margins of the balds are infiltrated by blueberries (*Vaccinium* sp.), rhododendrons, serviceberry, blackberry, azaleas, fire cherry, or the seedlings of forest canopy species.

Heath Balds

Dominated by ericaceous shrubs, the heath balds or “slicks” often form a virtually impenetrable tangle covering many of the steep, exposed slopes and ridges above 1200 m. Principal species include mountain laurel (*Kalmia latifolia*), rosebay rhododendron, piedmont rhododendron (*R. minus*), Catawba rhododendron, pepper-bush (*Clethra acuminata*), fetterbush (*Pieris floribunda*), blueberries, deerberry (*V. stamineum*) and mountain winterberry (*Ilex montana*).

Oak Forests

Most of the slopes and ridges below 1350 m are covered by forests dominated by various oaks (*Quercus* sp.). Locally these forests may extend up to 1650 m, where the growth becomes open and attenuated forming the “oak orchard” pattern. Common canopy species include white oak (*Quercus alba*), scarlet oak (*Q. coccinea*), chestnut oak (*Q. prinus*), black oak (*Q. velutina*), northern red oak (*Q. rubra*), red maple, sourwood (*Oxydendrum arboreum*), table mountain pine (*Pinus pungens*), pitch pine (*P. rigida*), white pine (*P. strobus*), silverbell (*Halesia carolina*), tulip poplar (*Liriodendron tulipifera*), sweet birch (*B. lenta*), and black gum (*Nyssa sylvatica*). Prominent shrubs forming the understory include mountain laurel, flame azalea (*R. calendulaceum*), blueberries (*Vaccinium* sp.), flowering dogwood (*Cornus florida*), pepperbush, hydrangea, sweet shrub (*Calycanthus floridus*), and blackberry.

Pine Forests

On exposed, steep, dry, south and southwestern facing slopes and ridges below 1200 m, forests dominated by pines often replace the more mesic oak forests. Major species, depending largely on elevation and slope, are Virginia pine (*P. virginiana*), pitch pine, and table mountain pine, while scarlet oak, chestnut oak, black oak, white oak, chestnut (*Castanea dentata*), white pine, black gum, and red maple may be common. Usually the understory is dominated by mountain laurel and *Vaccinium* species.

Cove Hardwood Forests

In moist coves and sheltered ravines up to 1250 m, a forest dominated by sugar maple, yellow buckeye, yellow birch, beech, silverbell, tulip poplar, northern red oak, eastern hemlock (*Tsuga canadensis*), red maple, white oak, basswood (*Tilia heterophylla*), and white ash (*Fraxinus americana*) occurs. The understory is sparse, and

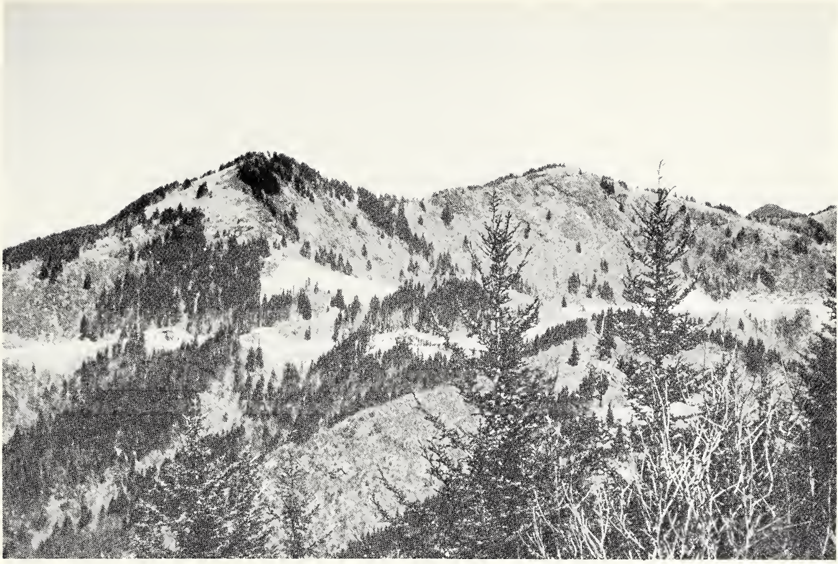

Fig. 1. View of Waterrock Knob (1918 m) showing vegetation typical of high elevations in the Plott Balsam Mountains. Spruce and fir forests are surrounded by northern hardwoods, heath balds, grass balds, and secondary successional communities. (Photo by the author).

plant species include rhododendrons, mountain laurel, hobblebush, dogwood, hydrangea, and sweet shrub. Ferns and wild flowers are abundant.

Secondary Successional Communities

Human activities and various natural phenomena have caused extensive disruption of the original vegetation at all elevations, and most of the range is covered by successional communities. The species composition, structure, and evolution of these successional communities depend in large part on elevation, exposure, slope, severity of soil damage, original vegetation, and adjacent undisturbed communities. Successional communities apparently are more likely to progress toward the original or very similar types of forests at low and medium elevations, when slope and exposure are not severe, and when soil damage is minimal.

Disclimax Communities

Where continued human activity prevents the development of successional communities, a variety of disclimax or artificially stable communities occur. Farmlands, orchards, recreation areas, roadways, campgrounds, and urban-suburban development are common at elevations below 1000 m, often resulting in the occurrence of bird species which otherwise would be absent.

ORNITHOLOGICAL EXPLORATION

During the 1880s, William Brewster (1886), Charles F. Batchelder (1886), and W.A. Jeffries and J.A. Jeffries (1889) very briefly visited the Plott Balsams and reported their observations. Some 60 years later, J.T. Tanner's (1952) study of the Black-capped Chickadee (*Parus atricapillus*) in the southern Appalachians was based in part on field work conducted in the range. Stupka's (1963) book on the Great Smokies and two of my previous papers (Simpson 1968a, 1968b) contain observations from the Plott Balsams, while additional data have been provided by R.H. Peake (pers. com.) and the files of the Blue Ridge Parkway Offices in Balsam and Oteen, N.C. My studies were conducted during the period 1956-1972, mostly during May, June, and July, and principally in the higher elevations, although the range was visited on numerous occasions during all months of the year. Extensive additional field work is needed, particularly in settled or disturbed areas and in the lower elevations, where waterfowl and shorebirds probably have been overlooked. Future studies should center on habitat selection, dates of occurrence, altitudinal distribution, density and population, and nesting data. This paper provides a baseline for future studies in the range.

TERMINOLOGY

The relative abundance and seasonal status terminology used in the checklist are based on that of Mengel (1965) and Stewart and Robbins (1958). Scientific names of birds are omitted in accordance with the policy published in *Chat* 40:10.

ANNOTATED BIRD SPECIES LIST

1. Common Loon: One record, a single bird found dead along the Parkway on 6 May 1961 by Stark and Atchison at 1707 m near Waterrock Knob (Stupka 1963).
2. Turkey Vulture: Permanent resident; uncommon at all elevations, March through October; usually absent above 1200 m November through late February.
3. Black Vulture: Summer resident, rare and erratic April through October, mainly at elevations below 1000 m.
4. Sharp-shinned Hawk: Probably a rare permanent resident, but my records are from April through October, with peak numbers in September and October. Mature forests at all elevations.
5. Cooper's Hawk: Probably a permanent resident. The only records are 27 March 1965 at 1460 m on Waterrock Knob and 18 October 1969 at 1270 m on Jones Knob.
6. Red-tailed Hawk: Permanent resident, all elevations. Increasingly scarce at higher elevations. Uncommon May through October; uncommon to rare, November through April.
7. Red-shouldered Hawk: Winter resident, mainly below 1100 m. Rare, November through February.
8. Broad-winged Hawk: Summer resident, all elevations. Uncommon, April through October.
9. Golden Eagle: One record, a single bird soaring over Jones Knob on 18 October 1969.
10. Marsh Hawk: Winter resident; open areas at all elevations. Scarce above 1200 m. Uncommon to rare, late September through early April.
11. American Kestrel: Permanent resident; uncommon to rare; open areas, mainly below 1200 m.
12. Ruffed Grouse: Fairly common permanent resident, mature forests at all elevations.
13. Bobwhite: Uncommon permanent resident below 1000 m; occurs at all elevations from May through August in mature woodlands and fields.
14. Turkey: J.L. Fleetwood (pers. com.) reports this species as a rare permanent resident in forests below 1350 m.
15. Sora: One record, a single bird seen by author at 1430 m along the Parkway on Waterrock Knob on 4 October 1969.
16. Killdeer: Permanent resident; open areas, mainly below 1200 m. Uncommon and erratic.
17. American Woodcock: Uncommon resident from March through November in grass balds, early successional and disclimax communities at all elevations.
18. Mourning Dove: Permament resident; fairly common in fields and disturbed areas, generally below 900 m.
19. Yellow-billed Cuckoo: Uncommon summer resident May through October in

mature forests up to 1200 m.

20. Black-billed Cuckoo: Uncommon to rare summer resident, May through October, in mature forests up to 1650 m.
21. Screech Owl: Uncommon to rare permanent resident in mature forests up to 1200 m.
22. Great Horned Owl: Uncommon to rare permanent resident in mature forests up to 1500 m.
23. Barred Owl: Fairly common to uncommon permanent resident in mature forests at all elevations.
24. Saw-whet Owl: Although probably a permanent resident, the only records are of single birds calling from the spruce-fir forests of Waterrock Knob at 1760 m on 12 April and 10 May 1968 (Simpson 1968b).
25. Whip-poor-will: Fairly common summer resident below 1000 m, April through October.
26. Common Nighthawk: Spring and fall transient; rare in May and fairly common July through September at all elevations.
27. Chimney Swift: Common summer resident at all elevations from early April through early October.
28. Ruby-throated Hummingbird: Fairly common summer resident at all elevations from late April through October.
29. Belted Kingfisher: Permanent resident along streams up to 1000 m; fairly common April through October; uncommon November through March.
30. Common Flicker: Fairly common permanent resident in forests at all elevations. Often abandons elevations above 1200 m during late fall and winter.
31. Pileated Woodpecker: Uncommon permanent resident in mature deciduous forests at all elevations, although scarce above 1400 m.
32. Red-bellied Woodpecker: Fairly common permanent resident in deciduous forests below 1250 m.
33. Yellow-bellied Sapsucker: Uncommon to rare permanent resident; mature deciduous forests above 1200 m, April through October; all elevations October through March, but scarce above 1300 m.
34. Hairy Woodpecker: Uncommon permanent resident in forests at all elevations.
35. Downy Woodpecker: Fairly common permanent resident in forests at all elevations; scarce above 1500 m.
36. Eastern Kingbird: Fairly common summer resident in open fields and farmlands below 900 m from late April through mid-September.
37. Great Crested Flycatcher: Fairly common summer resident, late April through mid-August, in deciduous forests below 1250 m.
38. Eastern Phoebe: Fairly common permanent resident up to 1300 m.
39. Acadian Flycatcher: Fairly common summer resident late April through mid-September in cove hardwoods and mesic oak forests up to 1150 m.
40. Least Flycatcher: Uncommon and local summer resident in open forests bordering clearings from late April through mid-September at elevations up to 1350 m.
41. Eastern Wood Pewee: Common summer resident in forests up to 1400 m from late April through mid-October.
42. Horned Lark: Two records: one at 1760 m on Waterrock Knob in June 1956 and one at 1030 m at Balsam Gap on 5 October 1969.
43. Tree Swallow: Uncommon and erratic transient, mainly below 1200 m; April and September.
44. Rough-winged Swallow: Fairly common summer resident below 1350 m, early April to mid-August; often at all elevations after mid-July.
45. Barn Swallow: Uncommon to fairly common summer resident in farmlands up to 1000 m from mid-April through mid-September.
46. Purple Martin: Uncommon to rare local summer resident, April through August; below 950 m except after late July, when individuals wander to all elevations.

47. Blue Jay: Common permanent resident in forests at all elevations; less common above 1550 m.
48. Common Raven: Uncommon permanent resident in forests above 1250 m.
49. Common Crow: Common permanent resident. All elevations from April through late October; usually avoids elevations above 1450 m from November through March.
50. Black-capped Chickadee: Uncommon permanent resident in spruce-fir and northern hardwood forests; wanders to elevations below 1400 m in October through April. First reported here by Batchelder (1886), who collected a series of specimens, this species reaches its presently established southern breeding limit for the eastern United States in the Plott Balsams (Tanner 1952).
51. Carolina Chickadee: Common permanent resident in forests up to 1300 m.
52. Tufted Titmouse: Common permanent resident in forests up to 1600 m.
53. White-breasted Nuthatch: Fairly common permanent resident in deciduous forests up to 1600 m. Usually abandons area above 1250 m from November through March.
54. Red-breasted Nuthatch: Erratic resident, rare to common. Spruce-fir forests above 1300 m April to October; all elevations from November through March.
55. Brown Creeper: Uncommon permanent resident. Spruce-fir forests above 1300 m from April through October; forests at all elevations from November through March.
56. House Wren: Uncommon summer resident, April through October, mainly around human settlement below 1000 m.
57. Winter Wren: Fairly common permanent resident. All elevations from October through mid-April, although scarce above 1500 m; understory of forests and heath balds above 1100 m from late April through September.
58. Bewick's Wren: Erratic, uncommon to rare summer resident in deciduous forests below 1350 m; April through September.
59. Carolina Wren: Fairly common permanent resident up to 1100 m; wanders to all elevations July to November.
60. Mockingbird: Permanent resident in fields and disclimax communities below 900 m. Uncommon, April through November; rare and erratic, December through March.
61. Gray Catbird: Common summer resident in understory, scrubby secondary growth, and heath balds at all elevations from April through early October.
62. Brown Thrasher: Fairly common summer resident, April through October in heath balds, shrub understory, and secondary successional communities up to 1500 m.
63. American Robin: Permanent resident in forests at all elevations. Common, March through November; uncommon, especially above 1350 m, December through February.
64. Wood Thrush: Common summer resident in mature deciduous forests up to 1450 m from mid-April through mid-October.
65. Hermit Thrush: Fairly common to uncommon winter resident, late October to mid-April, in forests below 1100 m. All elevations during migration in April and October.
66. Swainson's Thrush: Transient at all elevations; rare in May; fairly common in September and October.
67. Gray-cheeked Thrush: Rare transient, September and October, at all elevations.
68. Veery: Common summer resident in forests, heath balds, and secondary successional communities at elevations above 1100 m from May through mid-September. Transient at all elevations in May and September.
69. Eastern Bluebird: Uncommon permanent resident in open areas and disclimax communities up to 1350 m; rare above 950 m from November through March.
70. Blue-gray Gnatcatcher: Fairly common summer resident in deciduous forests up to 950 m from April through early October.

71. Golden-crowned Kinglet: Fairly common permanent resident. All elevations, late October through mid-April. Spruce-fir forests above 1350 m from April through September.
72. Ruby-crowned Kinglet: Fairly common winter resident, mainly below 1450 m, from October through April.
73. Water Pipit: Rare and erratic winter resident in fields and clearings below 1450 m; October through April.
74. Cedar Waxwing: Erratic resident; all elevations May through September; usually below 1350 m from late October through April.
75. Loggerhead Shrike: Uncommon to rare winter resident in open areas below 900 m; August through March.
76. Starling: Fairly common permanent resident around farms and human settlement up to 1000 m.
77. White-eyed Vireo: Fairly common summer resident in shrub understory from mid-April through September up to 950 m.
78. Yellow-throated Vireo: Fairly common summer resident, mid-April through September; mainly in pine forests up to 950 m.
79. Solitary Vireo: Fairly common summer resident, late March through October at elevations above 850 m; transient at all elevations March-April and October.
80. Red-eyed Vireo: Common summer resident, late April through early October, in mature forests up to 1550 m.
81. Black-and-white Warbler: Fairly common summer resident, April through early October, in mature forests up to 1550 m.
82. Worm-eating Warbler: Uncommon summer resident, late April through September, in mature oak forests up to 1250 m.
83. Golden-winged Warbler: Uncommon summer resident, mid-April through September, in disturbed woodlands up to 1650 m.
84. Tennessee Warbler: Transient at all elevations; uncommon to rare, late April to mid-May; fairly common September and October.
85. Northern Parula: Fairly common summer resident, April through September, in forests up to 1500 m.
86. Yellow Warbler: Fairly common summer resident, mid-April through August, in deciduous forests up to 975 m.
87. Magnolia Warbler: Transient; uncommon, May; fairly common, September and October; all elevations.
88. Cape May Warbler: Transient at all elevations; fairly common, late April to early May and late September through October.
89. Black-throated Blue Warbler: Common summer resident; late April through late October; in forest understory, heath balds, and secondary successional communities above 850 m. Transient at all elevations, April-May and September-October.
90. Yellow-rumped Warbler: Winter resident; fairly common in forests up to 1350 m from October through early May; transient at all elevations, October and April.
91. Black-throated Green Warbler: Fairly common summer resident, April through mid-October; in mature forests, especially coniferous, at all elevations.
92. Cerulean Warbler: Transient, rare to uncommon, April and May, below 1350 m.
93. Blackburnian Warbler: Uncommon summer resident above 1000 m, mid-April through early October; mainly in spruce-fir and northern hardwoods. Transient at all elevations, April-May and September-October.
94. Yellow-throated Warbler: Fairly common summer resident, April through September, especially in pine forests, up to 850 m.
95. Chestnut-sided Warbler: Common summer resident, mid-April through early October, in disturbed forests, heath balds, and secondary successional communities at all elevations above 975 m. Fairly common transient at all elevations, April and September.
96. Bay-breasted Warbler: Transient at all elevations. Uncommon to rare, May; un-

common to fairly common, September and October.

97. Blackpoll Warbler: Transient, mainly below 1650 m. Common in May; rare, October.
98. Pine Warbler: Uncommon summer resident in pine forests below 800 m from March through October. Postbreeding wanderer to all elevations from July through October.
99. Prairie Warbler: Uncommon summer resident, April through September, in second growth and disturbed areas up to 850 m. Postbreeding wanderer to all elevations after early August.
100. Palm Warbler: Uncommon to rare transient; all elevations, April-May and September-October.
101. Ovenbird: Common summer resident, mid-April to early October in forests up to 1400 m. Fall transient at all elevations from September through mid-October.
102. Louisiana Waterthrush: Fairly common summer resident, late March through mid-September; wooded streams up to 1150 m.
103. Kentucky Warbler: Fairly common summer resident late April to mid-September in deciduous forests up to 1050 m.
104. Common Yellowthroat: Fairly common summer resident in disturbed areas, heath balds, and secondary successional communities at all elevations; late April to mid-October.
105. Yellow-breasted Chat: Fairly common summer resident in shrub growth up to 1100 m; late April to mid-September.
106. Hooded Warbler: Fairly common summer resident, mid-April to mid-October, in deciduous forests up to 1200 m. Postbreeding wanderer to all elevations after late July.
107. Canada Warbler: Common summer resident, late April to mid-September, in forest understory, heath balds, and secondary successional communities above 1150 m. Transient at all elevations, April-May and August-September.
108. American Redstart: Fairly common summer resident, late April to mid-October, in forests up to 800 m. Postbreeding wanderer to all elevations after early August.
109. House Sparrow: Uncommon permanent resident around farms and human settlement up to 1050 m.
110. Eastern Meadowlark: Fairly common transient in open areas at all elevations, February through May and October through November. Uncommon summer resident and rare winter resident in farmlands up to 1050 m.
111. Red-winged Blackbird: Erratic transient in open areas up to 1500 m, late February through April and October-November. Uncommon permanent resident in farmland and open areas below 1000 m.
112. Rusty Blackbird: Uncommon to rare transient up to 1550 m, March-April and November.
113. Common Grackle: Fairly common summer resident in farmlands and open forests up to 900 m, March through November. Erratic and rare transient up to 1500 m, March-April and November.
114. Brown-headed Cowbird: Uncommon summer resident in farmlands up to 1050 m, March through November. Transient up to 1500 m; uncommon, March-April; rare, October-November.
115. Scarlet Tanager: Uncommon summer resident, mid-April to early October, in mature deciduous forests up to 1500 m.
116. Summer Tanager: Uncommon to rare summer resident, late April through early October, in deciduous forests up to 850 m.
117. Cardinal: Fairly common permanent resident up to 1100 m.
118. Rose-breasted Grosbeak: Fairly common summer resident, late April to mid-October, in deciduous and spruce-fir forests above 1000 m. Transient, all elevations, April-May and August-October.
119. Indigo Bunting: Fairly common summer resident, late April through mid-October,

in disclimax and secondary successional communities up to 1700 m.

120. Evening Grosbeak: Erratic winter resident, late November through early April, at elevations up to 1350 m.
121. Purple Finch: Fairly common winter resident, late October through mid-April, in forests at all elevations.
122. Pine Siskin: Erratic, possibly permanent resident. Flocks of 25 to 100 birds noted in spruce-fir and deciduous forests above 1450 m in June 1957, July through November 1968, September 1969, and February 1970.
123. American Goldfinch: Permanent resident in successional and disclimax communities at all elevations. Fairly common, April through October; uncommon, November through March, especially above 1350 m.
124. Red Crossbill: Erratic, probably resident. Most records are of flocks of 5 to 20 birds from June through December.
125. Rufous-sided Towhee: Permanent resident in heath balds, forest shrub layer, and successional communities. Common at all elevations, April through October; uncommon to rare above 1550 m from November to March.
126. Savannah Sparrow: Uncommon spring and fall transient, April-May and late October to November, in fields and open areas up to 1450 m.
127. Vesper Sparrow: Uncommon spring and fall transient, all elevations, open areas, March-April and October-November. Uncommon to rare winter resident below 1200 m.
128. Dark-eyed Junco: Permanent resident. Common to abundant at all elevations, October through April; above 950 m, May through September.
129. Chipping Sparrow: Fairly common summer resident, March to early November; open woodlands up to 1400 m.
130. Field Sparrow: Fairly common permanent resident in fields and farmlands below 1000 m. Rare summer resident in borders of grass and heath balds and successional communities up to 1750 m from April through October.
131. White-crowned Sparrow: Three birds just west of Balsam Gap at 1120 m on 14 February 1970.
132. White-throated Sparrow: Common winter resident, October through early May, up to 1100 m. Transient at all elevations; fairly common to very common, November and March.
133. Fox Sparrow: Uncommon winter resident in forest understory below 900 m, November through March. Uncommon transient at all elevations in November and March.
134. Swamp Sparrow: Rare to uncommon winter resident in wet fields and meadows below 900 m; late October through April. Uncommon to rare transient at all elevations, October-November and April.
135. Song Sparrow: Permanent resident in heath balds, successional communities, and disturbed areas. Common at all elevations, March through October; often abandons areas above 1250 m from November through February.

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General Field Notes

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Goshawk in Chesterfield County, S.C.

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During 1973, I observed two adult Goshawks (*Accipiter gentilis*) on the Carolina Sandhills National Wildlife Refuge approximately 9 miles N of McBee, Chesterfield County, S.C. The first individual was observed for about 3 minutes on 19 November 1973, as it hunted in a scrub oak area adjacent to a large field. Later, another and possibly the same individual was observed for approximately 1 minute on 21 November 1973, as it hunted the edge between a pine stand and a large field. Despite increased effort, I did not see the bird subsequent to 21 November 1973. I am familiar with the Goshawk in northern Minnesota, where I observed it in connection with research on grouse.

[*Associate Editor's Note:* The Goshawk is presently on the South Carolina Hypothetical List. The original record is based upon a dubious and unconfirmed observation made near Bull's Bay, Charleston County, S.C., in 1905 (*South Carolina Bird Life*, 1970, p. 556). Two additional valid sightings are required to place this species on the official South Carolina list. There are five published records of the Goshawk in North Carolina (*Chat* 39:18).—JRH]

Black Rail and Virginia Rail in Summer in Northwestern South Carolina

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31 July 1975

During the spring and summer of 1975, I was surprised to discover the presence of the Black Rail (*Laterallus jamaicensis*) and the Virginia Rail (*Rallus limicola*) in Anderson County, S.C.

Late in the afternoon of 13 May 1975 I was birding in a marsh about 2 miles S of Townville when I heard a *kee-kee-kurr* call nearby. Although I had never seen nor heard a Black Rail before, I immediately recognized the call from having heard it several years ago on the *Field Guide to Western Bird Songs* record. During the next hour I heard the call about 30 times, occasionally as close as 20 feet, but despite considerable search I was unable to obtain even a glimpse of the bird. Because it called often and at many points in the marsh, appearing to mark a territory, I hoped the bird was nesting there. The marsh was fairly extensive, lying next to Little Beaverdam Creek near its junction with Lake Hartwell. The vegetation ranged from 2-3 feet in height and was quite variable in composition, though juncus (*Juncus effusus*) was the dominant plant where the rail was heard.

On the following evening, Sidney Gauthreaux and Frank Moore accompanied me to the marsh. We immediately heard the rail calling, and Gauthreaux was able to get a good recording of the call on a tape recorder. We played the taped call back to the rail with only fair success. Despite attracting it to within 8 feet of us, we were never able to see it. We returned the next evening (15 May), armed with the tape recorder and new techniques designed to allow us to see a Black Rail. We heard the bird calling, and for over an hour we failed to get a glimpse of it. Finally, as we were walking toward the call, the bird flushed from beneath Moore's feet and flew about 50 yards before dropping into the marsh. Not only did we all record a life bird, but we had visually confirmed a Black Rail in the marsh.

In an attempt to find evidence of breeding, I returned to the marsh on a number of dates following the above sighting. On 20 May I heard the rail on many occasions but never saw it. On 7, 10, and 22 June I neither saw nor heard the rail, and I assumed that it must have finished its calling period, migrated out of the marsh, or have been killed.

Because of the disappointments in June, I was totally unprepared for what was to happen on the morning of 6 July. I was stunned when I flushed an adult Virginia Rail from 1.5-foot high grass-sedge in the marsh. The long, slender bill and dark plumage with considerable rusty-color in the wings were easily seen, and the 8-9-inch length ruled out the possibility of a juvenile King Rail (*Rallus elegans*). I searched the grass in the area where the bird flushed, hoping to uncover a nest. About a minute later and perhaps 25 feet from where the Virginia Rail flushed, an adult Black Rail flushed in front of me and flew about 30 yards before dropping into the marsh. I had an excellent look at it; and I observed the small (but not tiny) size, blackish plumage with white flecks in the wings, short bill, and especially the chestnut patch on the upper back. I did not see or hear any more rails in an extensive search of the marsh. Several other trips to the marsh in July after the above sightings were unsuccessful.

This appears to be the first summer record of the Virginia Rail in South Carolina. It breeds or has been recorded in summer at several locations in eastern North Carolina (Dare and Hyde Counties), according to *Birds of North Carolina.* Two records that perhaps relate to the Townville sighting are a pair of this species and two downy young seen on 14 June 1970 along the Chattahoochee River near Atlanta, Georgia (*Audubon Field Notes* 24:672), and an adult with chicks in the same area on 30 May 1971 (*American Birds* 25:844). Since I never heard Virginia Rails call at Townville, I am inclined to believe that the bird was not breeding; however, the 6 July date seems much too early for the bird to have been a southbound migrant.

The Townville records are the first indication of breeding of Black Rails in northwestern South Carolina, and apparently only one previous record exists for the area. On 2 May 1975 Kerry Reese and Larry Luckett found an injured Black Rail in a Screech Owl (*Otus asio*) nest in a Wood Duck (*Aix sponsa*) box near Clemson. Gauthreaux and I examined the bird, an adult, before it was collected later in the day. The Black Rail has been found breeding or recorded in summer at several localities in inland North and South Carolina (see *Birds of North Carolina* and *South Carolina Bird Life*), and once near Athens, Georgia (*Georgia Birds*). However, most or all of these records are over 25 years old, and it seems that the species is less numerous as a breeder in the inland parts of the Southeast than it was at the beginning of this century.

ADDENDUM

During the summer of 1976 I made weekly trips to the marsh described above. An adult Virginia Rail was flushed on 27 June, and a different bird, perhaps a juvenile (dark in color without rusty coloration in wings), was flushed on 1 July. No calls of the Virginia Rail were heard, nor did I find any evidence of Black Rails in the marsh in 1976. These two sightings, plus the record of July 1975, suggest that the Virginia Rail is nesting in this marsh.

Some Noteworthy Fall Migration Records from Franklin County, N.C., Including an Inland Sighting of a Wilson's Plover

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18 September 1975

In May of 1975, I began a study of the birds of Franklin County, N.C., using a modified version of the roadside census method and concentrating on the Tar River basin, which cuts across the central part of the county. A preliminary survey of the region revealed no major natural or man-make lakes. Privately owned Lake Sagamore (310 acres) offers the only sizable expanse of open water in the county. All other ponds built for recreational or agricultural purposes appear to be less than 100 acres in area. During the summer of 1975, Moore's Pond (65 acres), located on Little River near the Wake County line, was partially drained for repairs on the dam. A fairly good grassy flat developed here, but throughout the rest of Franklin County fall migrant shorebirds were dependent primarily upon narrow margins of farm ponds, particularly those used for crop irrigation and the watering of cattle. Although scattered sightings of one to six shorebirds, mostly Killdeer (*Charadrius vociferus*), Solitary Sandpipers (*Tringa solitaria*), and Spotted Sandpipers (*Actitis macularia*), were fairly common, no large flocks were found. Therefore, the occurrence of several noteworthy species during August and September of 1975 was quite surprising.

On 26 August I flushed three Upland Sandpipers (*Bartramia longicauda*) from a dry roadside pasture on the Mort Harris farm located on SR 1001 at Margaret, about 7 miles E of Louisburg. The brownish birds had yellow legs, but their rumps were not white. This immediately eliminated from consideration the several medium-sized yellow-legged shorebirds with which the Upland Sandpiper might be confused. In flight the birds uttered a melodius call consisting of four or five whistled notes. One individual perched briefly on a fence, displaying the typical Upland Sandpiper silhouette. Although the birds flew out of sight before I could study them through the telescope, I am familiar with the species and confident of the identification.

Elsewhere on the Harris farm, I found three American Golden Plovers (*Pluvialis dominica*) on 14 September. The birds were feeding with Killdeer at the edge of a pond and in the adjacent pasture. When the six Killdeer took flight, I noted among them three slightly larger brownish shorebirds having no distinctive field mark such as a wing stripe, white rump, or black axillars. After the birds settled to the ground, I was able to study one of the American Golden Plovers at leisure in bright midday sunlight through a 30X Balscope at a distance of perhaps 100 yards. The bird had a pale golden-brown breast that faded to creamy white at the throat and chin. A creamy stripe separated the black bill and eye from the dark golden-brown crown. I have seen this species once previously in fall on the Outer Banks.

On 30 August I found a Wilson's Plover (*C. wilsonia*) feeding with three Killdeer on a mud bar extending into an irrigation pond on the Wall farm, which is located directly across SR 1106 from Moore's Pond. The site is about 120 miles NW of the nearest beachfront. Field guide in hand and with the late afternoon sun behind me, I was able to study the bird at a distance of about 150 feet through a 30X Balscope. In general appearance the plover was slender, long-legged, and long-billed—not at all like the plump, short-legged, and stubby-billed Semipalmated Plover (*C. semipalmatus*). Slightly smaller than the Killdeer, the plover was about the size of a Spotted Sandpiper, which is what I thought it was at the first distant glance. The plover's mud-brown mantle was a shade lighter than that of the Killdeer. The length and thickness of the black bill were approximately the same as in the Killdeer. Legs, like those of the Killdeer, were a grayish flesh color rather than yellow. Across its breast the bird had a single wide sepia stripe just a little lighter shade of brown than the mantle. The breast stripe narrowed in the middle, suggesting that the bird was a hatching year Wilson's Plover rather than an adult female.

The Upland Sandpipers and Wilson's Plover were seen during a period of almost daily afternoon thundershowers, while the American Golden Plovers appeared the day after the passage of a cold front.

The Harris farm lies along the crest of a ridge between Tar River and one of its major tributaries, Cypress Creek, both of which flow in a southeasterly direction through eastern Franklin County. One pasture contains a water hole and a pond while the other has three ponds. This large expanse of grassland (approximately 2 square miles) seems to attract a wide variety of fall migrants that favor open country. Two immature Black Terns (*Chlidonias niger*) were present on 16 August and four on 26 August. Two Caspian Terns (*Hydroprogne caspia*) circled one of the ponds briefly on 24 August. An American Kestrel (*Falco sparverius*) was present on 11 August both here and at a farm on the other side of Cypress Creek. A Merlin (*F. columbarius*) was an early migrant at the Harris farm on 24 August. The brown-plumaged falcon, either a female or a hatching year bird, was on the ground where it appeared to be consuming prey. It flew first to a powerline, then to a fence, and finally into the woods. Light conditions were not good, and the Merlin never remained in one place long enough to permit careful study; but the dark brown mantle, indistinct facial pattern, heavily streaked underparts, and barred tail lacking rusty coloration clearly separated it from the smaller American Kestrel and the larger Peregrine Falcon (*F. peregrinus*).

Of the sightings mentioned above, that of the Wilson's Plover is the most noteworthy because this species rarely strays from the immediate coastal region. E. Milby Burton (*South Carolina Bird Life* 1970, p. 597) was surprised to find one feeding in a rice field several miles from the sea on 10 May 1952. This appears to be the only published inland record from South Carolina. Robert P. Holmes III (*Chat* 10:17) lists three Wilson's Plovers seen on 18 September 1945 among various shorebirds, including the Semipalmated Plover, recorded during an unspecified period of time at Mount Olive, Wayne County, N.C. Mount Olive lies about 120 miles W of Ocracoke Island and 60-65 miles NW of the nearest beachfront. Holmes is an excellent field observer who is thoroughly familiar with the shorebirds normally found in the Carolinas. I consider his record acceptable despite the unfortunate absence of details in the published account. The Wilson's Plover is not mentioned in R.J. Hader's "Species List of Birds of Wake County, North Carolina" (*Chat* 33:53-71), and the author informs me that he is not aware of any local sighting since publication of the county list in 1969. Thus, to the best of my knowledge, the Wilson's Plover seen in Franklin County on 30 August 1975 is the first record from piedmont North Carolina and the first inland sighting for the state to be reported with full details of field marks and viewing conditions.

Razorbill at Huntington Beach State Park and Pawleys Island, S.C.

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On 9 January 1976, Mark Bara and I surveyed the ocean beaches at Huntington Beach State Park and Garden City, S.C., for oil-soaked loons and other species. Bara, a biologist with the South Carolina Wildlife and Marine Resources Department, had been requested by the Department to seek evidence of afflicted birds.

At the State Park near the north parking lot, a single dead Common Loon (*Gavia immer*) was spotted on the beach above the high tide mark. Simultaneously, we noted lying nearby a smaller bird which proved to be a fairly well-preserved Razorbill (*Alca torda*). This bird was heavily oiled, its wing tips, tail, and feet being so oil-soaked that they were matted together. Bara took photographs of the bird at the spot where we found it, and I later took a number of additional photographs of the specimen at my home.

Another Razorbill was found on the beach at Pawleys Island, about 0.4 mile S of the South Causeway. It was found and reported to me on 1 May 1976 by Bobby DesPortes of Route 2, Hopkins, S.C. This bird also had been heavily oiled, and its body was badly decayed and dessicated. Apparently it had been in the same oil slick that destroyed the Huntington Beach bird. The Pawleys Island specimen will be given to the Charleston Museum.

Three of the five previous records of the Razorbill in South Carolina summarized by Sprunt and Chamberlain (*South Carolina Bird Life,* 1970, p. 284 and 609) are based on oil-soaked birds. One found 12 January 1948, on the beach at Pawleys Island is now a specimen in the collection of the Charleston Museum. Another found 9 March 1958, on the beach at Sullivans Island (*Audubon Field Notes* 12:270) was examined but not retained. A third was found 15 February 1963, on Bulls Island (*Chat* 28:51). Of the remaining records, a single bird was observed 12 March 1964, about 30 nautical miles off Charleston (*Chat* 30:26), and a flock of 12 was observed 19 December 1964, 7 miles E of Tybee Island, Georgia (*Oriole* 33:1). One additional, unpublished record of an oil-soaked bird is available, a specimen found at Edisto Beach by Roger Lambert on 17 January 1970 (*Lesser Squawk,* Charleston Natural History Society Newsletter, Vol. 21, No. 2). Burton (Supplement, *South Carolina Bird Life,* 1970, p. 609) states that Razor-billed Auks venture close to shore only if oil-soaked or ill.

Most field guides and other standard sources give Long Island, N.Y. as the southern limit of the Razorbill's winter range. A few give North Carolina as the southern limit. That this species frequently winters offshore in South Carolina waters is evidenced clearly by the records summarized in this report.

Black Guillemot on South Carolina Coast in Spring: A Second Sight Record for the State

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While birding on the north beach at Huntington Beach State Park, Georgetown County, S.C., on 17 April 1975, five observers saw what can only be described as a Black Guillemot (*Cepphus grylle*). Evelyn Dabbs, Charlotte Waggett, John Waggett, Phillip Waggett, and I noticed a bird, at first thought to be a Common Loon (*Gavia immer*), swimming about 500-600 feet offshore parallel to the beach. Soon realizing that the bird definitely was not a loon or a scoter, we studied it carefully with binoculars and with a zoom Balscope adjusted to the best power (40X). The ocean was relatively calm, yet there is always wave action some distance from the beach. The bird, swimming leisurely from right to left of the observers, alternately rose on the crest of the swells and disappeared in the trough of the waves. We watched the bird from about 1400 to 1430, during which time we moved from the beach to a dune to get a better view. The day was clear, and light conditions were excellent with the sun shining brightly behind us.

Being generally familiar with loons, scoters, and other oceanic birds that sit upon the water in the manner of the bird before us, we gave the unusual individual the closest scrutiny, carefully checking our observations against the diagnostic characters noted in the field guides. Each birder was impressed with the relative smallness of the bird, which was smaller than a loon or scoter. The bill was pointed and without any bulge or bluntness as in that of a scoter. In coloration the bird was over-all dark gray to black with no white showing except in the wing. At one time the bird rose in the water and shook both wings, thus revealing not only the grayish color of the entire upper wing surface but also the almost pure white wing patches on the fore part of the wings. We agreed without question that the bird was a Black Guillemot. Unfortunately, the bird was too far offshore to permit documenting the record with a recognizable photograph.

The appearance of the Black Guillemot at Huntington Beach corresponds with the normal mid-April northward movement of birds wintering off the Massachusetts coast (Bent, *Life Histories of North American Diving Birds*, 1919, p. 161). A severe storm system that occurred in the New England states shortly before the date of the local sighting may have displaced a migrant southward.

A Black Guillemot has been recorded once previously in South Carolina. The sighting took place on 21 September 1958 and was reported by Alexander Sprunt Jr. in a letter that appeared in J. Douglas Donehue's "Woods and Waters" column in the Charleston *News and Courier* dated 24 September 1958. Sprunt's letter reads in part: "Mr. Alex Mikell, while walking the beach on Morris Island saw, on the jetties which intrude upon the sands there, a bird unknown to him. He approached to such close quarters that he actually touched it, after studying it for several minutes. His very clear description leaves no room for any doubt that it was a Black Guillemot. It was described as about a foot long; black, with some white edging on some feathers; large white shoulder patches and brilliant red feet. It sat quietly on one of the rocks and seemed somewhat weak but, when touched by Mr. Mikell it took off and flew seaward. As far as the writer knows, this is the first time the species has ever been observed in the state." The Black Guillemot is included in the 1970 Revised Edition of *South Carolina Bird Life* (Sprunt and Chamberlain 1949), appearing in E. Milby Burton's Hypothetical List (p. 641) on the basis of the newspaper article quoted above.

Monk Parakeets in South Carolina

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On 10 April 1976, I was informed by Gurdon Tarbox, Director of Brookgreen Gardens, Georgetown County, S.C., that Monk Parakeets (*Myiopsitta monachus*) had been seen by Preston Pearson on Sandy Island Road (SR 362) west of the Gardens area. Mr. Tarbox also saw the birds the evening of 9 April 1976, in about the same location.

I visited the site (300-400 yards NW of US 17; 33° 30′ N, 79° 07′ W) at about 0930 on 10 April 1976 and saw seven Monk Parakeets fly from the roadside into a stand of small willows bordering the road. After some milling around, all of the birds landed in the same tree. Some promptly went to sleep, while the others preened. One of several color photographs (slides) shows three of the birds asleep on a branch.

I was unable to locate the birds on 11 April 1976, but on 12 April 1976, my wife Renée and I saw them at a site not far from the original location. I have not seen them since, although some of the boys in the "village" report seeing about five each day. Four or five birds were seen on 19 April by Mr. and Mrs. Tromater of Richmond, Virginia, on US 17 about 2 miles N of the original site. The birds apparently roam over a wide area which encompasses both the road and the village. How long the birds have been in the area is uncertain. One man reported that they were first seen about the middle of March, while others reported seeing them about 2 weeks later.

There is no doubt concerning the identification of the birds as Monk Parakeets. The color slides show clearly the distinguishing green back, long tail, blue-green wings, and the gray "cowl" or "hood" on the face and breast. I have also examined a dead bird that was found on a road and brought to me. This specimen, apparently a "road-kill", will be donated to the Charleston Museum for preparation as a study skin.

These sightings constitute the third record of the Monk Parakeet in South Carolina. A single adult bird was observed by Julian Harrison at Fort Johnson on James Island near Charleston, S.C., on 2 June 1974; several weeks later Perry Nugent saw another at the USDA Vegetable Breeding Laboratory near Charleston, S.C., on 17 July 1974 (*Chat* 38:97).

Two Records of the Clay-colored Sparrow from the Eastern Piedmont of North Carolina in Fall

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2 November 1975

The Clay-colored Sparrow (*Spizella pallida*) was first recorded in North Carolina on 19 September 1963 when Elizabeth D. Peacock (*Chat* 28:98) banded one near Duck in coastal Dare County. Paul W. Sykes Jr. (unpublished Master's thesis, N.C. State University, 1967) found the species to be an uncommon transient during his study of fall land bird migration in the Bodie-Pea Island section of Dare County. He saw nine Clay-colored Sparrows between 5 October and 14 November 1965. Lee Jones (*Audubon Field Notes* 22:25) found two at Cedar Island, Carteret County, on 30 September 1967. Subsequent records (*Chat* 35:34, 37:33, and 38:29) have established the regularity of this sparrow of the Great Plains as a fall transient in the northern part of coastal North Carolina between mid-September and mid-November. South of Cape Hatteras and inland, however, records are too scarce for the species to be considered anything more than accidental.

Robert and Elizabeth Teulings (*Audubon Field Notes* 22:25) netted a Clay-colored Sparrow on 14 October 1967 at the Mason Farm, which is located adjacent to Finley Golf Course just SE of Chapel Hill, Orange County, N.C. The Teulings were conducting a banding demonstration for a group of Carolina Bird Club members attending the fall meeting at Chapel Hill. The Clay-colored Sparrow was caught in a mist net set along one of the multiflora rose hedges dividing the corn fields on the farm. The bird had a thin white median line on the crown (Figure 1) and a distinctly buff-colored rump. In addition, the Teulings noted the grayish nape, or "collar," a characteristic of the species. The immature bird had an incompletely ossified skull and a wing chord of 58 mm. Ida Suttman photographed the bird (Figure 1).

The second inland fall record of the Clay-colored Sparrow for the state occurred on 23 October 1975 about 10 miles S of Louisburg in Franklin County. About 16:30 EDT, Eloise Potter stopped just E of US 401 to examine a flock of blackbirds in a soybean field on SR 1101. Some of the blackbirds flew into pines at the edge of a pasture across the road, displacing a small bird. Through a 7 X 50 binocular at a distance of about 20 feet, Potter saw in profile only the head of a sparrow that had such a wide buffy-yellow superciliary stripe, rich mahogany-brown auriculars, and distinct malar line that it appeared to be a Lark Sparrow (*Chondestes grammacus*). When the bird flew to a nearby tree, it revealed no breast spot or white in the tail, thus eliminating that species from consideration. The bird perched in another pine with only one wing, part of the back, and all of the tail visible. The wings were folded over the rump, hiding most of it. The brown wing had two distinct wing bars, the light-brown back was neatly streaked with dark brown and no gray could be seen where the rump met the back. The bird moved to a higher limb, perched facing the bright afternoon sun, and began preening. Potter was able to study the head and breast of the sparrow for about 5 minutes through a 30X Balscope at a distance of no more than 30 feet. The unstreaked and unspotted white breast had a slight dingy gray wash at each side. The black, or blackish-brown, whisker widened at the end toward the breast. The center of the ear patch was lighter than the edges but still a darker and more reddish brown than shown in illustrations of the Clay-colored Sparrow in field guides. Eye ring and eye stripe were buffy. The nape never was seen satisfactorily. Bill was a pinkish horn color, considerably less pink than that of the Field Sparrow (*S. pusilla*). The crown was a rich mahogany brown finely streaked with black and buffy gray. When the bird lowered its head to preen the breast, a distinct buffy gray median line extended the full length of the crown. The bird appeared to be an adult in winter plumage. The richness of the brown in the ear patch and crown as well as the strong yellow tinge to the eye stripe may have been a result of the warm glow of the afternoon sun. Unfortunately, there was no opportunity to study the bird in different light. About 10 minutes after the original sighting, the bird suddenly took flight, joining a passing flock of sparrows flying directly into the sun. These birds definitely were not Chipping Sparrows (*S. passerina*). They sounded like Savannah Sparrows (*Passerculus sandwichensis*), which reportedly have flocking calls very much like the faint *tisp* of the Clay-colored.

Although the Clay-colored Sparrow was found at Columbia, S.C., on 20 and 21 April 1968 (*Chat* 32:78) and at Clemson, S.C., on 29 and 30 April 1973 (*Chat* 37:89), no entirely satisfactory spring record is known from North Carolina. Harry E. LeGrand Jr. (*American Birds* 25:723) reported one at Raleigh on 9 May 1971. LeGrand (pers. com.) says the bird was feeding with Field Sparrows in a patch of weeds, and the flock perched in a fence for about 3 seconds. In spite of LeGrand's excellent reputation as a field observer, the brief viewing time does not seem adequate for the first

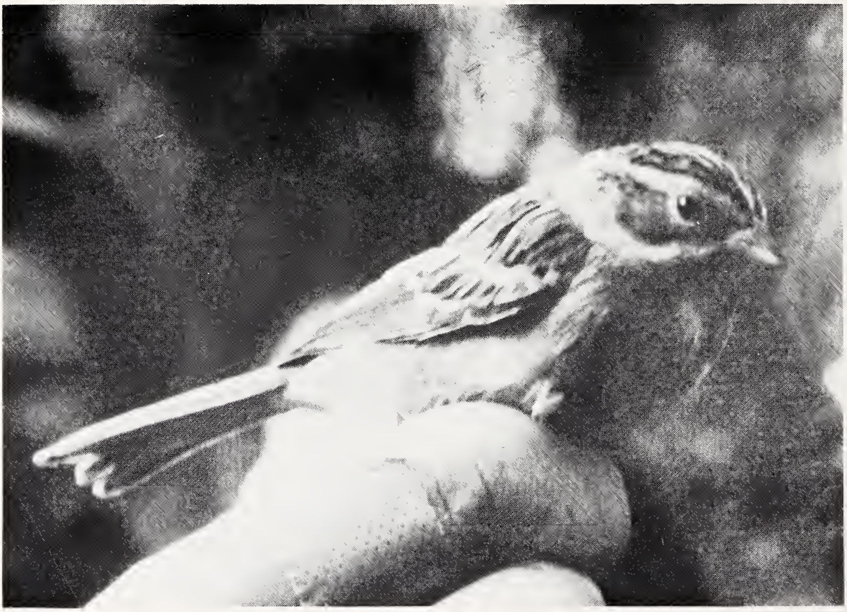

Fig. 1. Shown above is the immature Clay-colored Sparrow banded at Chapel Hill, N.C., on 14 October 1967 by Robert and Elizabeth Teulings. (Photo by Ida Suttman)

spring record of the species for the state. It should be noted, however, that spring Clay-colored Sparrows are far less difficult to identify than the fall immatures, which can be reliably separated from immature Chippies only by rump color, gray in the Chipping Sparrow and brown in the Clay-colored.

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(Winter Season, 1975-1976)

RED-NECKED GREBE: A sighting of an individual was recorded in South Carolina waters 10 miles outside Charleston harbor on 31 January during an offshore cruise sponsored by the Carolina Bird Club (Sidney Gauthreaux et al.).

HORNED GREBE: Winter visitors were unusually abundant at several of the larger inland reservoirs, topped by counts of 168 at Roanoke Rapids Lake and 116 at Lake Gaston in Halifax and Warren Counties, N.C., noted by Merrill Lynch on 27 December.

EARED GREBE: One was present in mid-December at Lake Wheeler near Raleigh, N.C., observed by Chris Marsh and James Mulholland; and another was seen at Salvo on the North Carolina Outer Banks on 25 January by Robert Anderson.

GREAT CORMORANT: An adult and immature were seen at the Charleston shipyards on 3 January by Jim Berry; and one adult was seen at Hatteras Inlet, N.C., on 12 March by Eloise Potter.

DOUBLE-CRESTED CORMORANT: An estimated 10,000 were seen massed in Pamlico Sound near Hatteras Inlet on the North Carolina coast on 10 January by Joe Hudick. Inland, four were noted on 31 March at Salem Lake near Winston-Salem, N.C., by Fran Baldwin, Pat Culberson, and Ramona Snavely, a second local record.

CATTLE EGRET: Three winter stragglers were seen in Currituck County, N.C., near Powell Point on 25 January by Dorothy Lapeyre; and several remained through the season in the Morehead City, N.C., area of Carteret County (fide John Fussell). Inland, a late individual was seen at Chapel Hill, N.C., on 6 December by Bill Wagner and another at Raleigh, N.C., on 9 January by Donna Goodwin and Darryl Moffett.

BRANT: Three were seen in Hatteras Inlet off Ocracoke Island, N.C., on 10 January by Joe Hudick.

SNOW GEESE: Census data reported by Jack Hagan showed a peak of 16,000 present at Pea Island N.W.R. in late December.

BLUE-WINGED TEAL: A very early inland migrant was seen at Townville, S.C., on 15 February by Harry LeGrand, and another was sighted on 7 March near Reidsville, N.C., by Barry Kinzie.

CANVASBACK: An unusually high local count of 150 was recorded inland at Lake Anne near Raleigh, N.C., on 4 February by Carl Leibrandt.

GREATER SCAUP: At Sullivans Island, S.C., a flock of 2000 was present in Breach Inlet 7 February, observed by Edmund Farrar.

BUFFLEHEAD: Over 500 were seen in Charleston harbor on 7 December by Ted Beckett.

BLACK VULTURE: A roosting flock of nearly 200 was found along the Roanoke River in northwestern Bertie County, N.C., on 11 March by Merrill Lynch.

RED-SHOULDERED HAWK: A good count of 23 was recorded during a 35-mile float trip down the Roanoke River from US 258 in the vicinity of Scotland Neck, N.C., by Merrill Lynch on 11 and 12 March.

RED-TAILED HAWK: A close sighting of an individual believed to be of the Krider's race was recorded near New Bern, N.C., on 22 December by Edmund LeGrand and Merrill Lynch.

ROUGH-LEGGED HAWK: One was seen near Wilmington, N.C., on 27 December by Joshua Lee. Another was observed at Mt. Pleasant, S.C., on 1 February by Jay Carter.

VIRGINIA RAIL: At Townville, S.C., individuals were seen on 5 December and 21 February by Harry LeGrand. December and March occurrences also were noted at Raleigh, N.C., by Robert Hader, indicating that this species is a possible inland winter resident.

YELLOW RAIL: One was observed in the Wrightsville Beach, N.C., area on 20 January by John Hardwick.

BLACK RAIL: One was flushed at House Pond, Bulls Island, S.C., on 30 December by Ed Farrar.

LONG-BILLED CURLEW: One was seen at Dewees Island near Charleston, S.C., on 27 March by Perry Nugent.

PURPLE SANDPIPER: At least 100 were seen on the Charleston, S.C., harbor jetties on 7 December by Ted Beckett.

BAIRD'S SANDPIPER: Two were observed at Mt. Pleasant, S.C., on 29 March by Perry Nugent.

LEAST SANDPIPER: Four were reported by Robert Hader to have overwintered at Raleigh, N.C., at Greenview Farm. A wintering individual was present also at Clemson, S.C., fide Harry LeGrand.

DUNLIN: A lingerer remained at Clemson as late as 14 December, observed by Harry LeGrand.

AMERICAN AVOCET: A large flock of at least 100 was seen at Morris Island near Charleston, S.C., on 2 December by Curt Laffin.

GREAT BLACK-BACKED GULL: One was found at Salem Lake near Winston-Salem, N.C., on 17 January by Charles Frost, a rare inland record.

BLACK-HEADED GULL: An individual in first-year plumage was present through most of February at Hurdles Cut ferry landing on the Pamlico River in Beaufort County, N.C. The bird was seen first by Anne and Bruce Reynolds.

LEAST TERN: One was seen at Shackleford Banks off Morehead City, N.C., on the early date of 28 March by John Fussell.

SANDWICH TERN: An early-arriving flock was noted on 21 March at Cape Point, Hatteras Island, N.C., by Joe Hudick.

BLACK SKIMMER: At least 600 were still present as late as 13 December at Morehead City, N.C., fide John Fussell.

BURROWING OWL: One was observed closely on 30 December on the grounds of the USDA Vegetable Research Laboratory near Charleston by Perry Nugent, the third sight record for South Carolina.

RUBY-THROATED HUMMINGBIRD: A late-lingering individual was seen on 19 January at Mt. Pleasant, S.C., by Grayson Hanahan.

PILEATED WOODPECKER: Forty-six were tallied 11-13 March along the Roanoke River during a 35-mile float trip downstream from US 258 in the vicinity of Scotland Neck, N.C., by Merrill Lynch.

SCISSOR-TAILED FLYCATCHER: One was a noteworthy find on 16 December at Sullivans Island, S.C., near Charleston, observed by Dennis Forsythe.

BEWICK'S WREN: One was reported by Harry LeGrand to have overwintered at Townville, S.C., and another was seen on 30 March near Chapel Hill, N.C., by Bill and Margaret Wagner.

LONG-BILLED MARSH WREN: Unusual inland winter sightings of a single bird were noted on 11 January and 21 February near Townville, S.C., by Harry LeGrand.

SPRAGUE'S PIPIT: One was a rare winter visitor at South Carolina's Santee N.W.R., observed by Perry Nugent and party on 21 February.

ORANGE-CROWNED WARBLER: A good count of 20 was recorded on 14 March at Magnolia Gardens near Charleston, S.C., by Edmund Farrar.

CAPE MAY WARBLER: Individuals were seen in Durham, N.C., area on 13 January by Wilson Brame and 20 January by Robin Carter and Stanley Alford.

BREWER'S BLACKBIRD: One was seen at Raleigh, N.C., on 26 December by James Mulholland, an uncommon winter record for that locality.

INDIGO BUNTING: A late-lingering individual was present 6-12 January at Long Beach, N.C., observed by Samuel Tipton.

DICKCISSEL: One was seen on 2 January at Wrightsville Beach, N.C., by Charlotte and Phil Waggett.

PINE GROSBEAK: A flock of 24 was seen on 27 March at Clemmons in Forsyth County, N.C., by Gardner and Margaret Gidley et al.

COMMON REDPOLL: One was a daily visitor at Pat and Jim Culberson's feeder in Winston-Salem, N.C., 13-26 February.

SAVANNAH (IPSWICH) SPARROW: A very unusual inland occurrence for an individual of this coastal race was recorded in Forsyth County, N.C., on 5 February by Fran Baldwin and Ramona Snavely. The bird was found at Belews Creek Lake in the company of Savannah Sparrows and Snow Buntings.

TREE SPARROW: One was recorded as a rare winter visitor at Winston-Salem, N.C., where it was observed several times at Reynolda Park 9-13 February by Charles Frost and Ramona Snavely.

LINCOLN'S SPARROW: For the third consecutive winter, an individual was a regular visitor to Perry and Cris Nugent's feeder at Charleston, S.C. Another was seen in the Charleston vicinity at Magnolia Gardens on 14 February by Edmund Farrar.

CHRISTMAS BIRD COUNT DATES

Saturday, 18 December 1976 through Sunday, 2 January 1977

Carolina Bird Club
INC.

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Carolina Bird Club, Inc., is a non-profit educational and scientific association founded in March 1937 and open to anyone interested in the study and conservation of wildlife, particularly birds. Dues, contributions, and bequests to the club are deductible from State and Federal income and estate taxes. Checks should be made payable to Carolina Bird Club, Inc., and sent to CBC Headquarters, P.O. Box 1220, Tryon, N.C. 28782.

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C49 Birds

The Chat

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The Chat

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OUR COVER—An adult Bald Eagle was photographed in Forsyth County, N.C., by Allie Brown, staff photographer for the Winston-Salem Sentinel. John Henry Dick contributed the drawing of a Least Sandpiper on page 93.

BREEDING SEASON HABITATS OF THE GOLDEN-CROWNED KINGLET IN THE SOUTHERN BLUE RIDGE MOUNTAINS

MARCUS B. SIMPSON JR.

The Golden-crowned Kinglet (*Regulus satrapa*) occurs through much of Canada, the northern United States, and down the Appalachian highlands to the southern limit of its breeding range in the mountains of western North Carolina (A.O.U. 1957). Pearson et al. (1959) state that the bird breeds on "some of the higher mountains" but they give no details of habitat selection. In the southern Blue Ridge Mountains, the species occurs during the summer months in three distinct types of coniferous forests.

1. *Spruce-fir forests.* The majority of kinglets inhabit the forests of red spruce (*Picea rubens*) and Fraser fir (*Abies fraseri*) at elevations above 1372 m (4500 feet). The species is well documented as a common summer resident in the Great Smoky Mountains (Stupka 1963); northern Great Balsam Mountains, Plott Balsam Mountains, southern Great Balsam Mountains, Shining Rock Ledge, Blue Ridge Mountains, and Nantahala Mountains (Simpson, present study); Black Mountains (Simpson 1972a); Grandfather Mountain (Pearson et al. 1959, Alexander 1973); Roan Mountain (Fred Behrend, pers. com.; Simpson, present study); the Mt. Rogers-Whitetop area of Virginia (Murray 1952; Simpson, present study); and apparently at Cone Lake, Watauga County, N.C. (Murray 1946). Breeding reports have been obtained in the Smokies (Stupka 1963), Black Mountains (Burleigh 1941), and Grandfather Mountain (Pearson et al. 1959); while breeding season densities have been reported by Adams (1959) and Alsop (1970).

2. *Hemlock forests.* The eastern hemlock (*Tsuga canadensis*) is a common forest tree throughout the southern Blue Ridge, where it often occurs as a major dominant in sheltered ravines and moist slopes. Golden-crowned Kinglets have been reported as fairly common summer residents in this forest type at 1220 m (4000 feet) on the Highlands Plateau, Macon County, N.C. (Stevenson 1941; Johnston 1964; Simpson, present study). I have noted one to two pairs at 1097 m (3600 feet) in the hemlock stand along Sim's Creek near the Blue Ridge Parkway in Watauga County, N.C., on numerous occasions during the months of June and July. In late June 1970, I noted a pair of kinglets in the hemlock woods at 1220 m (4000 feet) in the Craggy Mountain Scenic Area, Carter Creek, Great Craggy Mountains, Buncombe County, N.C. I am unaware of any breeding density studies or nesting evidence from this type of habitat.

3. *White pine forests.* The white pine (*Pinus strobus*) is widely distributed in the southern Blue Ridge, where it may form solid stands in some locales. At Highlands, Macon County, N.C., Golden-crowned Kinglets have been observed throughout the summer months by Toliver Crunkleton, David Johnston, Thelma Howell (pers. com.), and Simpson (present study) in the mature grove of white pines at 1170 m (3840 feet) near the Highlands Biological Station. A pair successfully fledged three young from a nest in a Norway spruce located within this area in June 1951 (see Simpson 1972b), and this spot marks the presently known southern limit of the species in the eastern United States during the breeding season.

SUMMARY

The Golden-crowned Kinglet inhabits three types of coniferous forests during the breeding season in the southern Blue Ridge Mountains. The majority of the birds occur in spruce-fir forests above 1372 m (4500 feet) while the species also inhabits hemlock stands between 1097 m (3600 feet) and 1220 m (4000 feet). At the Highlands Biological

Station, the bird has also been reported from white pine stands, and this locality is the southern breeding limit of the species in the eastern United States. Observers should be alert to document and report any additional breeding season records of the Golden-crowned Kinglet from western North Carolina.

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Department of Laboratory Medicine, Johns Hopkins Hospital, Baltimore, Md. 21205, 16 February 1976. [*Present address: 9706 Basket Ring Road, Columbia, Md. 21045.*]

CBC Roundtable

... with Louis C. Fink

When Do Birds Starve?

I spoke to the Rocky Mount Garden Club recently, and fielded the usual questions. Normally, I can anticipate the questions. But this time I was stuck. "How long can a wild bird live without food?" Assuming a hard freeze, with no insects available and plants covered with ice, how long will a bird survive? Does any reader know of any study on that point?

The 600 Club

Terry Moore now handles the affairs of the 600 Club. If you want to receive the Newsletter, send $5 ($7 for husband and wife) to Terry at 2699 Twiggs Circle, Marietta, Ga. 30067.

New Natural Area

On 11 August 1976 Trent Ragland, president of Martin Marietta Aggregates, presented to the State of North Carolina the deed to a 68-acre tract of land that has become the third protected natural area to be administered by the State Parks system. Known locally as Mitchell's Mill, the site includes a granite outcropping on which grow several rare plants unique to that particular habitat. In addition, many coastal plain plants reach their western limit at Mitchell's Mill while many mountain and piedmont species are at or near their eastern limit. The Mitchell's Mill Natural Area, located on NC 96 about a mile east of US 401, affords excellent birding, particularly during spring migration. Long used as a trash dump, the site is being cleaned by volunteers organized by Bob Teulings and assisted by other State Parks employees, some of whom are working on Saturdays without pay. Customary trash removal methods cannot be used on the granite outcropping without destroying the fragile plants beneath the debris. Numerous broken bottles, rusty cans, and other potentially dangerous objects must be lifted one at a time by hand, work that truly tests the volunteers' devotion to conservation.

Land Preservation Needed on Roan Mountain

According to an article in the May 1976 issue of *Audubon*, Roan Mountain on the North Carolina-Tennessee border is in danger of being overdeveloped as a vacation and retirement center. Funds are urgently needed to preserve the spectacular stands of rhododendron, flame azalea, and various wild flowers including the rare Gray's lily. Stanley A. Murray, president of the Southern Appalachian Highlands Conservancy with offices in Kingsport, Tennessee, points out that $500 will save an acre, $25 a rhododendron. Gifts for the Roan Mountain project also may be sent to the Nature Conservancy's headquarters in Arlington, Virginia. To bird students Roan Mountain is known as one of the few places in the Southeast where the Snow Bunting can be considered a regular winter resident.

(Continued on Page 92)

SPRING BIRD COUNT—1976	Total individuals	COAST			COASTAL PLAIN							PIEDMONT												MOUNTAINS		
		Morehead City, N.C. 24 April	Wilmington, N.C. 24 April	Charleston, S.C. 2 May	Beaufort Co., N.C. 9 May	Pamlico Co., N.C. 2 May	Dillon Co., S.C. 27 April	Fayetteville, N.C. 9 May	Southern Pines, N.C. 27 April	Columbia, S.C. 24 April	Roanoke Rapids, N.C. 8 May	Raleigh, N.C. 2 May	Durham, N.C. 24 April	Chapel Hill, N.C. 2 May	Greensboro, N.C. 1 May	Winston-Salem, N.C. 1 May	Stanly Co., N.C. 15 May	Iredell Co., N.C. 8 May	Charlotte, N.C. 15 May	Greenville, S.C. 8 May	Clemson, S.C. 4 May	Elkin-Ronda, N.C. 1 May	Caldwell Co., N.C. 28 April	Brevard, N.C. 1 May	Buncombe Co., N.C. 1 May	Avery Co., N.C. 22 May
Common Loon	125	111	6	....	2	....	....	....	3	....	1	....	....	....	....	....	1	....	....	....	1	....	....	....	....	....
Red-throated Loon	2	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Horned Grebe	11	....	....	4	5	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....
Pied-billed Grebe	27	....	4	....	....	5	*	....	1	....	....	5	....	3	....	5	....	1	....	....	....	....	....	....	....	3
Brown Pelican	194	....	4	190	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Gannet	23	22	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Dbl.-cr. Cormorant	367	57	216	60	18	10	....	*	3	....	3	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Anhinga	38	3	5	30	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Great Blue Heron	157	11	35	46	1	6	*	2	1	....	13	11	2	4	2	8	7	2	1	....	2	1	....	1	....	1
Green Heron	221	2	17	39	10	15	3	14	4	3	8	24	5	21	10	16	6	1	4	3	10	....	....	3	3	....
Little Blue Heron	68	13	20	32	....	....	....	*	*	....	....	....	....	....	....	1	*	....	....	....	....	....	....	2	....	....
Cattle Egret	369	259	18	58	....	10	12	*	1	....	....	....	1	....	....	....	9	*	....	1	*	....	....	....	....	....
Great Egret	190	25	64	97	....	....	....	1	....	....	2	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Snowy Egret	133	22	52	59	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Louisiana Heron	80	21	9	50	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....
Black-cr. Night H.	32	7	3	22	....	....	....	*	....	....	....	....	....	....	....	*	....	....	....	....	*	....	....	....	....	....
Yellow-cr. Night H.	11	*	3	8	....	....	....	....	....	....	....	....	....	....	....	*	*	....	....	....	....	....	....	....	....	....
Least Bittern	37	2	1	21	....	2	....	....	....	....	1	10	....	....	....	....	....	....	....	....	*	....	....	....	....	....
American Bittern	25	1	2	2	....	2	....	1	....	....	2	11	....	3	....	*	....	....	....	....	1	....	....	....	....	....
Wood Stork	26	....	....	26	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Glossy Ibis	44	34	4	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
White Ibis	300	6	5	289	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Canada Goose	128	....	8	....	....	5	....	*	....	....	4	6	....	....	4	89	6	....	6	....	....	....	....	....	....	....
Mallard	172	3	1	1	20	6	....	9	2	....	5	13	....	10	29	46	*	12	2	....	2	....	....	2	9	....
Black Duck	21	9	1	....	1	3	....	*	....	....	....	6	....	....	1	....	....	....	....	....	....	....	....	....	....	....
Gadwall	*	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Pintail	7	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Blue-winged Teal	52	10	*	8	....	1	....	*	....	....	8	*	2	5	....	4	2	....	....	....	2	6	....	....	4	....
American Wigeon	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
N. Shoveler	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....
Wood Duck	388	1	4	57	6	2	17	41	7	....	26	68	17	35	19	10	8	2	8	2	30	9	....	14	3	2
Redhead	15	....	....	....	....	15	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ring-necked Duck	9	1	....	....	....	....	....	....	....	....	4	1	....	....	2	1	....	....	....	....	....	....	....	....	....	....
Canvasback	5	....	....	....	....	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Scaup (sp. ?)	43	....	....	....	....	41	....	....	....	....	....	....	....	1	....	....	....	....	1	....	....	....	....	....	....	....
Bufflehead	3	1	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black Scoter	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Ruddy Duck	35	....	....	....	9	20	....	....	....	....	....	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Hooded Merganser	1	....	....	....	....	....	....	....	....	....	1	*	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Red-br. Merganser	49	10	11	....	....	5	....	....	....	....	20	....	....	....	....	....	....	....	....	....	3	....	....	....	....	....
Turkey Vulture	244	6	6	19	6	3	....	....	1	2	33	4	34	59	3	3	12	12	....	1	4	5	....	20	10	1

Black Vulture	86	1		9				*		4	54	1	11	4		1		1			*					
Swallow-tailed Kite	11			11																						
Mississippi Kite	3			1							1		1													
Sharp-shinned Hawk	8							*				1		2		*							1	1	2	1
Cooper's Hawk	12		1	3				1		1					1	1	*			2					2	
Red-tailed Hawk	140	1	2	8	3	1	2	4	1	8	11	15	7	27	6	6	8	10	3		10			1	6	
Red-shouldered H.	55	9	1	12	1			1	1	1	3	5	3	10			1	1			2		3	1		
Broad-winged Hawk	38	2	1				1		3		1	2	3	5		2		2			2	1		9	2	2
Marsh Hawk	9	1			1	2		*						1		1		3								
Osprey	129	23	27	23	5	20			1	1	3	5	*	4	7	1	7	*			*	1		1		
Merlin	*											*														
Am. Kestrel	28	1	6			4				2		*	1	*	2	5		1			1		2	1	2	
Ruffed Grouse	7																							1	4	2
Bobwhite	995	19	50	20	36	78	24	31	16	16	36	98	83	155	49	73	55	19	22	12	31	7	12	31	21	1
Turkey	9			1							8															
King Rail	4		2			1					1															
Clapper Rail	87	44	24	19																						
Virginia Rail	8	3	2									3														
Sora	17	7	2	3		2					2	1														
Black Rail	2	1																			1					
Purple Gallinule	5			5																						
Common Gallinule	64	2	11	48		1						1				1	*									
American Coot	265	68	37	32	10	9			25		5	71		2	3	1		*			1				1	
Am. Oystercatcher	309	75	139	95				*																		
Semipalmated Plover	1613	167	98	1340							3	1		1		1					2					
Piping Plover	14	12	2																							
Wilson's Plover	23	7	16																							
Killdeer	245	4	6	2	2	9		*	3	2	1	24	22	37	18	43	20	5	10	12	9	1	2	3	10	
Bl.-bellied Plover	584	93	280	211								*														
Ruddy Turnstone	83	19	50	14																						
Am. Woodcook	24	7				1			1		1	5	1	2		2	1				3			*		
Common Snipe	38	11	1				*	1	1		1	3	11	1	1	3				1	3					
Whimbrel	197	88	22	87																						
Long-billed Curlew	1	1																								
Spotted Sandpiper	509	*	2	227	8	11	18	18	15	1	45	24	5	28	6	17	26	5	1	5	24	1	1	12	5	4
Solitary Sandpiper	206	4	7	7			37	2	6	3	7	20	16	26	3	40				8	8	4		1	7	
Willet	342	146	144	52																						
Greater Yellowlegs	48	10	8	18		1		*			4	2	1			2					1	1				
Lesser Yellowlegs	152	87	6	37		1	3	1	*		1	1	1	1		5				5	3					
Red Knot	73	33	30	10																						
Purple Sandpiper	4		4																							
Pectoral Sandpiper	7	5												1		*					1					
White-rumped Sandpiper	2	2																								
Least Sandpiper	380	201	6	54			5	6	1		29	27	1			4	*			14	32					
Dunlin	1532	1068	315	149																						
Short-bill. Dowitcher	326	113	213																							
Long-bill. Dowitcher	5	5																								
Dowitcher (sp. ?)	152			152																						
Stilt Sandpiper	4	2																			2					
Semip. Sandpiper	76	14	1	52			3				1	2									3					
Western Sandpiper	20	3	1	13											3											
Marbled Godwit	16		15	1																						
Sanderling	420	330	40	48											2		*									
Parasitic Jaeger	2	2																								

SPRING BIRD COUNT—1976	Total individuals	COAST			COASTAL PLAIN						PIEDMONT												MOUNTAINS		
		Morehead City, N.C. 24 April	Wilmington, N.C. 24 April	Charleston, S.C. 2 May	Beaufort Co., N.C. 9 May	Pamlico Co., N.C. 2 May	Dillon Co., S.C. 27 April	Fayetteville, N.C. 9 May	Southern Pines, N.C. 27 April	Columbia, S.C. 24 April	Roanoke Rapids, N.C. 8 May	Raleigh, N.C. 2 May	Durham, N.C. 24 April	Chapel Hill, N.C. 2 May	Greensboro, N.C. 1 May	Winston-Salem, N.C. 1 May	Stanly Co., N.C. 15 May	Iredell Co., N.C. 8 May	Charlotte, N.C. 15 May	Greenville, S.C. 8 May	Clemson, S.C. 4 May	Elkin-Ronda, N.C. 1 May	Caldwell Co., N.C. 28 April	Brevard, N.C. 1 May	Buncombe Co., N.C. 1 May	Avery Co., N.C. 22 May
Gr. Bl.-backed Gull	2	....	1	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Herring Gull	880	705	121	20	15	2	....	....	....	....	15	....	....	....	1	....	....	....	....	....	....	1	....	....	....	....
Ring-billed Gull	1041	389	340	83	15	12	....	*	4	4	160	....	....	....	15	....	6	....	....	....	13	....	....	....	....	....
Laughing Gull	1736	728	334	182	50	441	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Bonaparte's Gull	2	....	....	....	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Gull-billed Tern	69	20	32	17	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Forster's Tern	61	3	49	2	3	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....
Common Tern	464	283	56	120	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Least Tern	394	83	247	55	9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Royal Tern	1097	346	461	280	9	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sandwich Tern	9	3	6	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Caspian Tern	9	....	9	....	....	....	....	*	....	....	....	*	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Black Tern	1	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Black Skimmer	716	352	243	121	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Rock Dove	1230	14	134	47	29	1	3	6	1	64	21	233	93	26	124	294	20	15	12	12	26	26	20	*	9	....
Mourning Dove	4271	47	117	39	72	62	128	201	98	38	416	407	116	548	347	588	81	147	146	42	182	33	67	158	191	....
Ringed Turtle Dove	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Ground Dove	8	*	3	5	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Yel.-billed Cuckoo	94	1	....	34	5	3	....	13	....	1	9	7	1	7	....	3	2	1	2	1	1	....	....	*	3	....
Bl.-billed Cuckoo	3	1	....	2	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....
Barn Owl	18	....	....	....	....	....	....	....	....	1	....	....	....	....	1	7	....	2	....	....	....	....	2	....	5	....
Screech Owl	34	2	2	....	....	....	....	3	....	....	1	6	....	1	....	4	1	....	4	....	6	....	3	....	1	....
Great Horned Owl	21	1	2	2	....	....	....	1	....	....	2	3	2	3	....	1	2	....	....	....	....	....	....	*	2	....
Barred Owl	77	7	3	11	2	....	....	6	3	....	3	8	5	22	....	3	....	2	*	....	....	....	....	2	....	....
Saw-whet Owl	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....
Chuck-will's-widow	85	20	8	1	2	5	....	3	3	....	2	9	....	....	....	....	5	....	....	....	26	....	....	1	....	....
Whip-poor-will	173	....	2	....	....	2	....	3	5	....	7	12	14	61	....	3	6	5	*	1	30	5	....	2	15	....
Common Nighthawk	66	4	4	7	1	1	1	5	1	....	2	9	*	2	18	5	....	1	1	....	1	....	3	*	....	....
Chimney Swift	1356	43	10	46	40	21	33	29	48	5	78	106	43	137	114	167	8	38	77	22	138	51	5	67	29	1
Ruby-th. Hummingbird	210	3	4	22	4	....	*	6	2	....	16	13	12	35	5	13	10	5	....	....	6	....	3	23	23	5
Belted Kingfisher	177	*	12	8	7	7	4	5	4	2	5	15	7	22	15	17	10	5	3	1	4	2	3	8	9	2
Common Flicker	774	40	45	12	44	20	5	22	16	4	14	61	30	48	84	153	21	10	8	20	24	8	10	37	30	8
Pileated Woodpecker	187	16	7	46	3	13	5	3	2	1	21	2	1	2	1	3	11	3	....	1	7	3	3	15	18	....
Red-bellied Woodp.	822	22	22	78	19	11	11	25	17	6	34	96	75	156	56	67	18	24	5	7	43	9	4	4	12	1
Red-headed Woodp.	181	9	43	25	25	7	2	*	4	2	1	9	8	7	22	3	4	....	....	5	2	....	....	1	2	....
Yel.-bel. Sapsucker	13	....	1	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	2	4	3	1
Hairy Woodpecker	101	5	2	6	....	....	*	5	1	1	4	13	1	17	....	11	1	4	....	....	6	1	....	5	14	4
Downy Woodpecker	344	12	5	9	1	6	1	8	7	5	27	39	19	55	16	28	6	6	7	5	22	8	3	20	25	4
Red-cock. Woodp.	15	2	....	8	3	....	....	*	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Eastern Kingbird	523	22	29	61	34	26	10	19	8	12	33	62	25	75	11	25	2	17	4	6	28	4	2	....	8	....

Great Cr. Flycatcher	637	75	42	162	29	37	1	34	5	4	30	38	8	23	13	22	14	13	15	13	30	....	3	6	16	4
Eastern Phoebe	316	1	....	....	3	....	....	1	5	....	5	30	14	55	28	30	8	26	4	3	10	3	5	46	24	15
Yel.-bel. Flycatcher	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....
Acadian Flycatcher	293	11	4	30	12	2	....	3	5	....	25	62	5	67	7	17	3	18	7	2	11	....	1	....	1	....
Least Flycatcher	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	4	....	....	....	1	....	....	1	....	1
Eastern Wood Pewee	219	3	....	79	15	6	....	5	4	....	1	15	....	13	3	6	2	20	3	1	8	....	2	....	8	25
Horned Lark	16	....	....	....	....	....	....	....	....	....	1	....	....	....	....	2	....	12	....	....	1	....	....	....	....	....
Tree Swallow	1301	2	78	491	183	139	....	3	5	....	64	175	3	58	12	1	....	2	6	....	79	....	....	....	....	....
Bank Swallow	227	....	....	2	1	....	....	5	8	....	....	2	....	....	4	6	....	....	....	....	194	....	....	5	....	....
Rough-wg. Swallow	539	8	19	20	9	8	48	26	16	6	17	36	12	25	35	74	12	2	1	2	40	12	6	63	40	2
Barn Swallow	2593	59	103	445	141	63	40	67	24	....	52	138	22	134	142	166	277	112	42	32	340	8	25	107	39	15
Cliff Swallow	67	....	....	....	....	....	....	....	2	2	....	*	....	....	....	....	25	3	4	....	31	....	....	....	....	....
Purple Martin	1106	28	77	6	181	86	27	35	6	4	1	66	52	16	130	129	54	42	22	14	15	80	28	7	....	....
Blue Jay	2583	62	94	56	54	80	45	42	59	74	56	260	180	263	195	142	84	75	29	43	94	28	66	146	243	113
Common Raven	9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	7
Common Crow	1452	21	24	68	8	15	10	42	3	21	47	146	54	213	149	97	59	63	19	35	20	12	20	132	146	28
Fish Crow	326	54	45	51	44	6	....	*	13	....	82	27	*	....	....	....	2	....	....	....	2	....	....	....	....	....
Carolina Chickadee	1503	44	36	86	23	27	8	32	17	15	141	176	73	156	100	138	52	51	42	10	48	6	18	70	104	30
Tufted Titmouse	1229	21	32	98	24	14	7	23	14	8	37	144	57	145	69	117	33	30	17	8	52	18	21	94	114	32
White-br. Nuthatch	190	....	2	2	1	....	1	....	2	....	1	7	8	27	5	29	6	2	*	....	....	2	5	42	45	3
Red-br. Nuthatch	27	....	....	....	....	....	....	....	*	....	....	7	3	1	....	1	....	....	....	....	1	....	....	2	....	12
Brown-hd. Nuthatch	306	7	36	46	9	5	3	11	18	3	3	19	20	28	16	11	....	6	28	3	34	....	....	....	....	....
Brown Creeper	7	....	....	1	....	3	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	2
House Wren	216	2	1	....	....	....	....	....	2	....	8	34	10	27	18	24	15	7	5	1	7	8	26	3	15	3
Winter Wren	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	1	....	....	....	....	3
Carolina Wren	1777	63	69	117	43	44	15	42	13	14	129	197	105	301	98	126	74	38	40	17	59	21	14	54	70	14
Long-bill. Marsh W.	20	2	5	4	....	*	....	*	....	....	....	4	....	....	....	1	....	....	....	....	4	....	....	....	....	....
Short-bill. Marsh W.	6	1	2	....	....	1	....	....	....	....	....	*	....	....	....	....	....	....	....	....	2	....	....	....	....	....
Mockingbird	1748	80	130	29	39	68	52	42	26	38	53	209	76	205	183	161	64	84	34	47	56	7	10	9	46	....
Gray Catbird	969	10	21	7	18	20	7	18	18	1	31	171	21	100	41	179	39	27	11	12	37	21	17	24	49	69
Brown Thrasher	837	17	57	21	25	25	10	19	17	6	25	80	23	88	54	103	60	41	11	26	52	8	16	22	29	2
American Robin	3899	1	70	1	23	54	132	67	59	13	79	320	127	214	654	641	103	246	73	117	118	15	167	265	241	99
Wood Thrush	1172	10	15	23	21	10	12	29	12	6	83	168	65	206	115	139	30	42	13	5	47	10	10	31	36	34
Hermit Thrush	20	8	....	....	....	....	*	*	2	....	....	7	....	....	....	1	....	....	....	....	....	....	....	1	1	....
Swainson's Thrush	99	....	....	....	....	....	....	8	1	....	....	23	3	4	6	16	....	11	3	10	14	....	....	....	....	....
Gray-cheeked Thrush	13	....	....	....	....	....	....	....	....	....	1	1	....	....	1	1	....	7	....	....	1	....	....	1	....	....
Veery	74	....	....	1	....	....	....	1	1	....	11	18	....	6	2	6	....	1	....	1	4	....	....	*	1	21
Eastern Bluebird	858	3	1	17	23	9	5	20	11	15	28	53	21	133	44	82	85	93	8	16	67	9	32	23	60	....
Bl.-gr. Gnatcatcher	974	33	46	190	6	12	5	31	16	....	56	182	61	149	6	88	15	25	8	....	31	3	1	2	8	....
Golden-cr. Kinglet	12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	5	5	2
Ruby-cr. Kinglet	178	....	3	3	1	2	....	....	11	....	3	7	52	29	9	28	....	....	....	....	15	1	....	7	7	....
Water Pipit	36	....	....	....	....	....	....	....	....	....	....	23	....	2	....	5	....	6	....	....	*	....	....	....	....	....
Cedar Waxwing	931	60	75	6	....	....	....	5	20	....	19	90	99	69	132	277	25	10	....	....	5	2	2	8	16	11
Loggerhead Shrike	71	2	3	8	....	....	2	7	3	4	....	9	1	4	7	3	4	3	....	2	6	....	2	1	....	....
Starling	5765	39	387	42	54	82	96	97	44	110	163	645	152	347	1423	421	111	222	287	155	148	35	104	170	400	31
White-eyed Vireo	660	120	35	131	5	32	3	9	8	3	17	107	26	94	2	14	5	1	2	1	22	6	6	6	5	....
Yellow-th. Vireo	149	....	5	7	5	2	2	....	4	....	14	38	11	28	4	11	5	2	....	....	6	2	....	*	3	....
Solitary Vireo	65	....	1	2	....	....	....	....	....	....	1	3	3	3	3	7	....	2	....	....	3	....	1	8	1	27
Red-eyed Vireo	1370	29	30	97	15	9	3	85	17	5	186	246	104	286	38	57	....	31	9	12	31	2	5	23	20	30
Philadelphia Vireo	*	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....
Warbling Vireo	3	....	....	....	....	....	....	....	....	....	1	....	....	1	....	1	....	....	....	....	....	....	....	....	....	....
Black-and-white W.	327	5	5	2	2	1	1	10	16	....	56	105	11	60	6	7	....	5	....	....	2	....	....	17	11	5
Prothonotary Warbler	241	60	8	41	6	6	6	5	10	....	32	19	6	19	1	3	14	....	....	....	4	....	....	*	1	....

SPRING BIRD COUNT—1976	Total individuals	COAST			COASTAL PLAIN							PIEDMONT												MOUNTAINS		
		Morehead City, N.C. 24 April	Wilmington, N.C. 24 April	Charleston, S.C. 2 May	Beaufort Co., N.C. 9 May	Pamlico Co., N.C. 2 May	Dillon Co., S.C. 27 April	Fayetteville, N.C. 9 May	Southern Pines, N.C. 27 April	Columbia, S.C. 24 April	Roanoke Rapids, N.C. 8 May	Raleigh, N.C. 2 May	Durham, N.C. 24 April	Chapel Hill, N.C. 2 May	Greensboro, N.C. 1 May	Winston-Salem, N.C. 1 May	Stanly Co., N.C. 15 May	Iredell Co., N.C. 8 May	Charlotte, N.C. 15 May	Greenville, S.C. 8 May	Clemson, S.C. 4 May	Elkin-Ronda, N.C. 1 May	Caldwell Co., N.C. 28 April	Brevard, N.C. 1 May	Buncombe Co., N.C. 1 May	Avery Co., N.C. 22 May
Swainson's Warbler	17	4	2	2	1	3	*	....	1	....	1	3	....	....	....	*	....	....	....	....	....	....	....	....	....	....
Worm-eating Warbler	50	19	1	1	....	....	....	....	2	....	1	6	1	2	....	3	1	4	....	2	1	1	....	....	5	....
Golden-winged W.	8	....	....	....	....	....	....	....	....	....	....	....	....	2	....	1	....	....	....	....	....	....	....	....	5	....
Blue-winged W.	17	....	....	....	....	....	....	....	....	....	1	6	1	7	....	1	....	....	....	....	1	....	....	....	....	....
Tennessee Warbler	10	....	....	....	....	....	....	....	....	....	....	....	....	1	....	*	....	....	....	....	8	....	....	....	1	....
Orange-crowned W.	1	....	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Nashville Warbler	*	....	....	....	....	....	....	....	....	....	....	*	....	....	....	*	....	....	....	....	....	....	....	....	*	....
Northern Parula	703	31	95	205	20	14	3	20	4	7	33	134	15	59	1	6	5	18	....	2	10	....	....	15	1	5
Yellow Warbler	140	....	....	....	1	....	....	3	....	....	8	21	1	5	7	15	2	5	....	3	20	1	2	11	35	....
Magnolia Warbler	12	....	....	....	....	....	....	....	....	....	....	3	....	1	....	3	....	1	....	....	3	....	....	1	....	....
Cape May Warbler	148	....	....	1	....	....	....	....	....	2	1	3	....	17	3	30	1	22	....	5	52	....	1	2	6	2
Black-th. Blue W.	196	....	....	2	2	2	....	12	1	....	14	58	3	30	6	19	1	4	....	2	6	....	....	4	5	25
Yellow-rumped W.	1724	40	125	25	3	33	34	1	16	....	33	225	201	253	165	343	....	31	....	16	107	1	2	20	50	....
Black-th. Green W.	99	28	....	55	....	....	....	....	....	....	1	....	....	3	....	2	4	....	....	....	2	....	....	....	*	4
Cerulean Warbler	27	....	....	....	....	....	....	....	....	....	22	3	....	....	....	*	....	....	....	....	....	....	....	....	2	....
Blackburnian W.	13	....	....	....	....	....	....	1	....	....	....	4	....	1	1	2	....	1	....	....	1	....	....	1	1	....
Yellow-throated W.	475	49	61	209	5	7	1	2	6	....	14	30	8	53	9	6	1	6	....	3	3	....	1	....	1	....
Chestnut-sided W.	95	....	....	1	....	....	....	....	....	....	....	2	1	*	2	3	15	2	....	5	2	....	1	5	18	38
Bay-breasted W.	10	....	....	....	....	....	....	....	....	....	1	....	....	*	....	*	....	2	....	3	3	....	....	....	1	....
Blackpoll Warbler	175	2	....	1	1	*	....	20	....	....	13	28	....	5	5	*	1	6	13	18	47	....	....	4	*	11
Pine Warbler	975	59	44	425	20	27	....	11	31	2	8	81	49	120	22	26	17	1	3	1	26	....	....	....	2	....
Prairie Warbler	568	268	17	44	10	49	....	8	3	....	4	15	23	78	3	8	6	5	1	....	15	1	....	2	8	....
Palm Warbler	27	....	....	....	....	....	....	....	....	....	....	2	1	3	....	1	....	....	....	....	15	....	....	4	1	....
Ovenbird	239	2	1	1	4	5	....	9	5	....	2	82	....	69	4	13	1	1	....	1	*	2	....	19	10	8
N. Waterthrush	86	....	....	....	....	....	....	2	1	....	14	33	....	25	4	2	....	....	2	....	1	....	....	*	2	....
La. Waterthrush	84	....	....	1	....	....	....	2	1	....	6	14	14	32	2	2	2	1	....	2	4	....	....	*	1	....
Kentucky Warbler	68	1	2	2	....	....	....	....	2	....	9	14	1	21	5	4	....	....	....	....	6	1	....	....	*	....
Connecticut W.	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	*	....
Com. Yellowthroat	1048	117	22	61	8	25	2	55	12	2	111	166	48	185	29	54	1	30	9	7	51	2	5	26	11	9
Yellow-br. Chat	294	1	4	12	5	12	....	12	....	....	13	40	13	84	15	17	2	16	3	2	32	2	4	1	4	....
Hooded Warbler	339	53	1	113	5	21	*	7	6	....	9	33	9	44	....	6	1	2	....	1	6	....	....	6	16	....
Wilson's Warbler	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....	....	....	....	....	....
Canada Warbler	41	....	....	....	....	....	....	....	....	....	....	*	....	....	....	2	....	....	....	....	1	....	....	1	2	35
Am. Redstart	392	3	1	2	....	....	....	26	8	1	59	101	12	113	10	21	5	5	5	4	6	1	....	6	3	....
House Sparrow	3136	23	175	5	46	182	120	110	41	....	127	464	104	205	351	412	218	105	56	47	104	31	50	53	67	40
Bobolink	1411	....	....	2	47	35	26	50	....	....	372	369	....	116	5	....	20	140	....	24	200	....	....	5	....	....
E. Meadowlark	1906	49	84	8	22	60	4	42	9	18	222	162	92	157	125	192	56	195	32	29	128	7	33	124	55	1
Red-wg. Blackbird	3300	129	216	197	38	203	126	200	39	62	294	230	82	199	139	271	182	126	40	57	274	3	50	66	68	9
Orchard Oriole	319	22	47	17	12	29	4	11	12	5	40	44	5	19	13	5	8	3	1	....	21	....	1	....	....	....
Northern Oriole	79	19	....	2	....	....	*	....	....	....	2	15	1	9	6	5	1	4	....	....	8	1	1	....	5	....
Rusty Blackbird	40	....	....	....	....	1	....	....	....	....	3	....	....	11	1	6	....	....	....	....	....	5	....	12	1	....

Brewer's Blackbird	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2	....	....	....	....	....	....	....	....	....	....
Boat-tailed Grackle	474	108	172	194	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Common Grackle	6767	120	228	50	105	396	176	230	84	93	401	462	170	472	946	608	147	406	331	108	488	56	126	297	209	58
Brown-hd. Cowbird	905	24	45	27	14	46	11	40	14	9	66	72	31	52	37	112	86	26	4	15	37	8	15	43	43	28
Scarlet Tanager	200	....	....	....	....	....	....	*	1	....	3	16	17	48	10	13	2	2	....	4	36	1	2	7	12	26
Summer Tanager	397	8	19	94	17	5	5	15	6	3	46	43	5	39	11	18	25	10	4	1	19	1	1	....	2	....
Cardinal	3861	110	71	180	30	101	53	96	63	48	286	404	160	576	272	385	178	125	79	29	82	57	78	171	209	18
Rose-br. Grosbeak	109	....	....	....	....	....	....	1	2	....	1	12	4	7	1	1	....	5	....	6	27	....	....	5	9	28
Blue Grosbeak	352	....	1	7	8	8	3	49	1	21	44	38	9	55	16	12	11	17	3	8	40	1	....	....	....	....
Indigo Bunting	903	5	4	15	40	33	1	70	1	26	131	75	18	159	20	69	23	90	6	21	55	8	5	4	24	....
Painted Bunting	98	3	18	70	....	....	....	*	....	7	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Evening Grosbeak	754	27	239	....	....	....	11	3	15	....	1	58	16	131	12	109	....	*	....	....	*	32	21	77	2	*
Purple Finch	76	....	....	....	....	....	....	....	....	1	....	3	....	2	....	4	....	....	....	....	10	....	2	44	9	1
House Finch	8	....	....	....	....	....	....	....	....	....	....	1	....	....	....	3	....	....	4	....	....	....	....	....	....	....
Pine Siskin	307	....	....	....	....	....	....	*	*	....	2	76	12	29	1	62	....	....	....	8	12	....	7	83	15	....
Am. Goldfinch	2459	....	95	2	20	14	*	9	24	3	40	485	381	357	201	183	49	68	10	26	151	9	14	75	243	....
Red Crossbill	15	....	....	....	....	....	....	....	7	....	....	3	5	*	....	....	....	....	....	....	....	....	....	....	....	....
Ruf.-sided Towhee	1691	92	49	62	26	33	12	30	34	27	44	220	92	196	134	158	18	30	46	18	72	19	30	109	92	48
Savannah Sparrow	200	22	14	1	1	1	10	1	20	....	7	40	55	5	8	3	....	....	....	....	11	....	....	1	....	....
Grasshopper Sp.	54	....	....	....	....	....	....	....	....	....	4	3	2	....	12	8	3	7	....	....	14	....	1	....	....	....
Sharp-tailed Sp.	20	16	4	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Seaside Sparrow	71	62	9	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Vesper Sparrow	1	....	....	....	....	....	....	....	....	....	....	....	*	1	....	....	....	....	....	....	....	....	....	....	....	....
Bachman's Sparrow	11	....	3	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....
Dark-eyed Junco	120	....	....	....	....	*	*	....	....	....	....	....	1	....	4	....	....	....	....	....	....	....	....	1	40	74
Chipping Sparrow	728	3	23	7	5	5	35	1	9	3	10	80	65	167	80	97	46	8	4	2	15	6	3	33	19	2
Field Sparrow	702	1	12	....	2	5	5	11	....	10	51	76	41	139	47	103	11	29	3	11	86	3	15	13	27	1
White-cr. Sparrow	42	....	....	....	....	....	....	....	....	....	....	2	....	25	5	....	1	....	....	....	8	1	....	*	....	....
White-th. Sparrow	1993	23	97	19	1	8	6	1	37	27	13	384	169	540	192	283	....	5	....	2	40	18	32	58	38	....
Lincoln's Sparrow	*	....	....	....	....	....	....	....	....	....	....	*	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Swamp Sparrow	148	13	2	1	....	2	....	1	3	....	19	26	20	21	....	7	....	....	....	....	31	....	....	2	....	....
Song Sparrow	771	2	9	....	....	1	*	....	....	....	3	25	12	2	54	135	2	12	10	15	20	9	23	177	190	70
Peep Sandpipers	60	60	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sterna (sp?)	1	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1	....	....	....	....	....
Total no. species	254	167	166	161	103	114	68	123	112	67	144	148	115	136	118	148	110	109	71	86	143	77	76	105	113	68
Total no. individuals	110,334	9079	8004	9761	2085	3176	1517	2482	1361	919	5390	10,689	4138	10,225	7753	9037	2822	3319	1739	1285	4933	797	1291	3442	3866	1224
Field observers	406	12	20	24	9	8	2	16	4	8	9	23	33	48	28	36	21	10	9	7	5	4	10	14	38	8
Yard observers	110	4	0	0	1	0	4	8	6	0	0	10	1	4	7	4	9	1	2	2	0	5	8	26	8	0
Field parties	180	7	9	7	5	4	2	7	4	2	6	13	9	24	9	18	8	4	4	3	4	3	5	7	13	3
Field-hours	1334	47	84	57	38	39	18	22.25	28	?	40.5	105	60	146	81	150	38	39.5	20	11	41	41	78	31	98.75	20
Field-miles by foot	595.5	31	38	32	14	10	6	16	8	?	22	65	58	91.5	25	49	20	27	4	8	18	11	10	9.5	17.5	5
Field-miles by car, boat, golf cart	3509.6	137	469	223	130	165	69	82	178	?	40	79	173	248.5	355	62	125	136	102	67	268	28	63	93	178.1	39

*Seen in count area during count period but not on count day.

SPRING BIRD COUNT—1976

HARRY E. LeGRAND JR.

Inclement weather on weekends in May and only mediocre results from the coastal counts were the principal factors in producing a lackluster 1976 Spring Bird Count, with a rather low grand total of 254 species (eight below the 1975 total). There were no truly outstanding sightings of rarities, and 14 of the 22 localities having counts in both 1975 and 1976 declined in species as compared with 1975. Moreover, nine of these 14 dropped at least eight species, and two counts tallied at least *20* fewer species than in 1975. As a general rule, the number and quality of coastal counts on the Spring Count contribute far more to the success or failure of the Count (in terms of species) than any other factor. Thus, with only three coastal localities represented (all well below their 1975 totals), the Count was not able to attain the quality of those for the past five or so years.

Morehead City (167 species) edged out Wilmington (166) for first place, with Charleston third at 161. Raleigh (148) and Winston-Salem (148) led the inland counts, though both broke 150 last year. Other successful inland counts, all with record-breaking species totals, were Roanoke Rapids (144), Clemson (143), Chapel Hill (136), and Fayetteville (123). Fayetteville, Stanly County, and Avery County return to the Spring Count table after absences of several years. This year, as in 1975, 25 counts were submitted, but unfortunately the important Hilton Head, S.C., area was not represented in 1976.

Rain fell on 10 of the 25 counts; most of these were piedmont and mountain counts held on 1, 2, 8, or 15 May. A few areas even postponed their counts because of actual or predicted rainfall. Several compilers mentioned that the severe April drought had a negative effect on their counts, and other counts were hurt by a late spring migration that peaked after the count days.

Even though there were no "accidentals" reported on the 1976 Count and no true additions to the cumulative Spring Count species list (*Parasitic Jaeger* removes "jaeger sp." from the list), a number of noteworthy sightings were made. The most exciting were single *Mississippi Kites* sighted far north of their range at Durham and Roanoke Rapids, and inland records of species seldom seen away from the coast: *American Oystercatcher* and *Painted Bunting* at Fayetteville, and 2 *Stilt Sandpipers* at Clemson. Other highlights were the 2 *Parasitic Jaegers* and *Long-billed Curlew* again at Morehead City, a *Black Rail* at Clemson, and a pair of *Merlins* at Raleigh. Notably high grand totals were made of three species of *buteos, Spotted* and *Solitary Sandpipers, Barn Owls,* most *swallows,* and *Eastern Bluebirds* (numbers continue to increase in the Carolinas). Very high individual counts were the 10 *Least Bitterns* and 11 *American Bitterns* at Raleigh; 11 *Swallow-tailed Kites,* 227 *Spotted Sandpipers,* and 425 *Pine Warblers* at Charleston; 22 *Barred Owls* at Chapel Hill; 19 *Worm-eating Warblers* and 268 *Prairie Warblers* at Morehead City; and 239 *Evening Grosbeaks* at Wilmington. Disappointingly low grand totals were 44 *Glossy Ibis,* no *Bald Eagles* or *Black-necked Stilts,* a surprising scarcity of most *rails,* low shorebird numbers on the coastal counts (especially "peeps"), only 48 *Greater Yellowlegs,* just 2 *Bonaparte's Gulls,* low counts of both *marsh wrens,* and 68 *Kentucky Warblers* (found on only 12 counts). Rail totals were also quite low on the 1975 Christmas Bird Count; perhaps rail populations are actually declining, or are birders no longer walking in marshes or listening for the calls of these birds?

Several comments about the Spring Count seem necessary. Even though each presently established count group becomes more experienced in birding ability and more familiar with its count circle with each passing year, there is still little growth in the Count in terms of new count localities. We still need more coastal plain counts, and only three counts along the immediate coast is disappointing. There are several factors relating to the stagnancy of this Count: most counts have to be restricted to weekends, making it difficult for an individual birder to assist on more than two counts (some counts depend heavily on birders recruited from other towns); the Carolina Bird Club's Spring Meeting often falls on the last weekend of April or the first weekend of May, and thus often interferes with some counts; and many colleges hold examinations during late April and early May, causing some observers to give up birds for the books. Perhaps the lack of national publicity (spring counts are not published in *American Birds*) is another reason that birders are reluctant to start a new count. Another subject of concern is the timing of a town's count date with the peak of the spring migration. I feel that many inland counts hold their counts from several days to more than a week too early. These counts barely hit the beginning of the passerine migration, especially the warbler migration. Some counts are held so early that such common summer resident species as *Acadian Flycatcher, Eastern Wood Pewee, Yellow-breasted Chat, Blue Grosbeak,* and *Indigo Bunting,* as well as a few common transients (such as the *Blackpoll Warbler*), are completely missed on count day! Other counts are held so early or are so weak that they can't find 10 species of warblers, or even 25 individual warblers! Admittedly the peak number of species present in an area seems to be highest in the last few days of April or the first few days of May, partly due to late departing winter residents, yet the peak migration of passerines is usually 3-10 May in most inland areas.

Compilation of the counts continues to improve. Editing the Count was fairly easy this spring, partly because few truly rare sightings occurred on the counts. I did reject the following questionable records, with my reasons for doing so: a nearly unbelievable 13 *Yellow-bellied Sapsuckers* on a mid-May count (too many for a mid-May count), a *Yellow-bellied Flycatcher* (very rare), 2 *Least Flycatchers* from a coastal plain count (too far east), and 55 *Rusty Blackbirds* (too many for a spring count; these and probably many others of this species reported on spring counts are likely to be juvenile or perhaps even adult Common Grackles).

I would like to thank all observers and compilers who participated on this Count. I particularly admire those birders who are in the field well before sunrise and well after sunset. Durham had birders owling from midnight to midnight, and Winston-Salem also had people in the field beginning at midnight. We hope that the 1977 Count will be blessed with beautiful weather, an abundance of rare sightings, many record-breaking individual counts, and an increase in observer and locality participation.

COMPILERS' COMMENTS

COAST

MOREHEAD CITY, N.C. (center: 0.7 mile NW of Crab Point in Newport River).

24 April. Count day was warm, dry, and windy. Winter birds left early this spring, but summer birds were not early. One *Anhinga* was at Huntley's Impoundment (David Whitehurst) and two were soaring near Walker's Mill Pond (Compiler, Kevin Hintsa); this is a new species to the count. Single *Broad-winged Hawks,* rare migrants in this area, were seen near Core Creek bridge (Donna Goodwin) and at Harlowe (Compiler, Goodwin, Hintsa, Darryl Moffett). *Black Rail* (Compiler) responded to a tape recording in North River Marsh at 0300. Several other *Black Rails* were heard in these marshes this spring. Several observers saw the same *Long-billed Curlew* on Bird Shoal that had been present on last year's spring count and the past two Christmas counts. The *Black Tern,* in breeding plumage, was seen by many birders; it was the earliest record for the area (other spring records only in May and June). R.J. Hader saw the *Parasitic Jaegers* flying E about 100 yards from the beach at Fort Macon; characteristic jaeger shape and flight noted, and the birds were approximately the size of Laughing Gulls. Hintsa saw the *Black-billed Cuckoo* at close range at Mill Pond, noting the reddish eye-ring and black upper and lower mandibles. *White-rumped Sandpiper, Long-billed Dowitcher,* and *Stilt Sandpiper* are apparently regular in spring at North

River. The remarkably high *19 Worm-eating Warblers* were observed at several locations by the Compiler, Hintsa, and Moffett. One *Ground Dove* (Hader) was near Fort Macon on 25 April. [Excellent details for all unusual observations.—HL]—JOHN FUSSELL III, P.O. Box 520, Morehead City, N.C. 28557.

WILMINGTON, N.C. (center: Monkey Junction).
24 April.—FRANCES B. NEEDHAM, Box 81, Wilmington, N.C. 28401.

CHARLESTON, S.C. (center: 14 miles NE of Mt. Pleasant and 0.5 mile E of US 17).

2 May. The area from Copahee Sound to Bull's Bay (estuaries, tidal flats, marsh, etc.) received less extensive coverage than last year. The majority (about 200) of the unusually high number of *Spotted Sandpipers* were distributed throughout this area and on Caper's Island. *Purple Gallinules* are appearing on the mainland in increasing numbers, perhaps in response to the greater availability of suitable habitat. The 2 *Black-billed Cuckoos* were both seen and heard by a half dozen observers. *Chestnut-sided Warbler* (Perry Nugent) and the *Cape May Warbler* (E.C. Clyde) were seen at close range. The Compiler heard the *Worm-eating Warbler.*—JULIAN HARRISON, Biology Department, College of Charleston, Charleston, S.C. 29401.

COASTAL PLAIN

BEAUFORT COUNTY, N.C. (center: entrance of Upper Goose Creek into Pamlico River).

9 May. The *Bank Swallow* (Compiler, Elizabeth Ball) was seen on a wire with Tree and Barn Swallows.—GERALDINE COX, Route 1, Box 151A, Merritt, N.C. 28556.

PAMLICO COUNTY, N.C. (center: in Florence at intersection of 1324 and 1329).

2 May. Marvin Turnage and Theresa Lafond saw the 3 *Brown Creepers* clearly. The faint song was heard; spiral climbing behavior, pointed tail, and curved bill seen well.—GERALDINE COX, address as above.

DILLON COUNTY, S.C. (center: Dillon).

27 April. Abundance of sandpipers due to mudflats present at most ponds caused by the lack of rain in April.—JOHN H. WILSON, Box 535, Dillon, S.C. 29536.

FAYETTEVILLE, N.C. (center: Fayetteville Market Square).

9 May. The 123 species was quite good for Cumberland County and was possible only because of the time and effort devoted by our group. The *American Oystercatcher* (Philip J. Crutchfield, Jim Crutchfield) was seen for an hour on a sand bar in a pond at Becker Sand and Gravel Company on the evening of 7 May. The bird was crow-sized, black above and white below, with a reddish bill. The female or immature *Painted Bunting* (Henry A. Rankin Jr., Mr. and Mrs. William D. Sherman) was seen at a yard feeder; it was a small, olivaceous, thick-billed bird, seen with the similar-sized Indigo Bunting. Other rather rare species seen on the count were *Double-crested Cormorant, Caspian Tern, Bank Swallow,* and *Blackburnian Warbler.*—JACK WINGATE, 3616 Crampton Road, Hope Mills, N.C. 28348.

SOUTHERN PINES, N.C. (center: 1 mile NE of Skyline).

27 April. The count was taken during an extended drought. Very few birds, even permanent resident and summer resident species, were singing. [Scarcity of Yellow-breasted Chat, Blue Grosbeak, and Indigo Bunting, in addition to the low total of 112 species, indicates that 27 April was too early for a good count this spring.—HL] Noteworthy species were *Common Loon* and *Red Crossbill* (Compiler, James F. Parnell); the Compiler saw the *Double-crested Cormorants, Cattle Egret,* and *Cliff Swallows.* —J.H. CARTER III, P.O. Box 891, Southern Pines, N.C. 28387.

COLUMBIA, S.C. (center: intersection of Gill's Creek and Bluff Road).

24 April. Although Annie Faver reported nests of the *Painted Bunting* in lower Richland County in 1952, this is the nearest approach to Columbia (within 2 miles of the center of the count area). [This count can produce at least 40 more species than the 67 reported. Two Cliff Swallows were reported, yet no Barn Swallows or House Sparrows were seen on the count?—HL]—GILBERT BRISTOW, 2921 Blossom Street, Columbia, S.C. 29205.

ROANOKE RAPIDS, N.C. (center: 1.4 miles SE of Weldon).

8 May. The *Double-crested Cormorants,* male *Hooded Merganser,* 20 *Red-breasted Mergansers,* and adult *Laughing Gull* were seen by the Compiler next to the dam on Roanoke Rapids Lake. The two pairs of *Ring-necked Ducks* were seen on Mush Island Beaverpond near Weldon. Kevin Hintsa identified the immature *Mississippi Kite* at Occoneechee Neck, where the species has been seen on several recent occasions. He noted the brownish, speckled coloration and long, narrow wings and tail, as the bird soared with both species of vultures. *King Rail* (Compiler) was clearly seen at Occoneechee Neck. The *Semipalmated Plovers* and *Semipalmated Sandpiper* (David Knapp, Ken Knapp, Mike Knapp) were at Johnston's Farm on Occoneechee Neck. *Warbling Vireo* was attracted to a Screech Owl call by Mike Tove at Johnston's Farm. He observed all field marks, including the dingy grayish or brownish-gray upperparts, whitish breast with a slight yellowish tinge along the flanks, an indistinct eye-line, and lack of wingbars. [Good details for all unusual species.—HL] —J. MERRILL LYNCH, 539 Henry Street, Roanoke Rapids, N.C. 27870.

PIEDMONT

RALEIGH, N.C. (center: Norfolk and Southern RR crossing on Lake Wheeler Road).

2 May. The count had to be postponed one day because of rain. Unfortunately, we then lost a number of participants and got substantially reduced coverage of usually productive areas, such as Umstead State Park. Ken, David, and Michael Knapp found a *Common Gallinule* and several waterfowl stragglers at Lake Benson headwaters with the use of a canoe. Singing *House Finch* (Kevin Hintsa) was at the Rose Garden where about 40 spent the winter. Two days later he found a female with the male at the same location. Chris Marsh found two singing *Swainson's Warblers* and Ray Winstead found a third, all along Swift Creek. A pair of *Merlins* was seen by Darryl Moffett at close range on 3 May from the roof of the Museum of Natural History. The *Lincoln's Sparrow* (Clark Olson) was carefully studied near Lake Raleigh on 8 May. He observed the finely streaked buffy breast, and he is familiar with the species.—R.J. HADER, 3313 Cheswick Drive, Raleigh, N.C. 27609.

DURHAM, N.C. (center: 1 mile N and 1 mile E of junction of Eno River and US 501).

24 April. The outstanding sighting was an adult *Mississippi Kite* seen along the Eno River east of Roxboro by Mike Schultz. He observed the small to medium size; long, slender, pointed wings; long, square, black, unbarred tail; and characteristic kite shape and flight. This is the first piedmont record of the Mississippi Kite for North Carolina. The five *Red Crossbills* (many observers) were observed on several occasions behind the Duke University Physics Building. Lance Peacock, Douglas Brame, and Bob Dyle found both species of *yellowlegs* and a pair of *Blue-winged Teals* at Needham's Farm. Owen and Jim McConnell sighted the *Cattle Egret; Least Sandpiper* (Angelo Capparella, Eric Garner, Jay Garner, Lois Garner) was near the sewerbeds. [I received full details for 17 species, *all* written directly by the observers on separate sheets of paper and submitted intact by the compilers. Though I had some trouble keeping track of eight pages of details, and such compiling may cost 10 or 20 cents extra postage, this is the best and easiest way for the compiler of a count to send me complete

details of rarities.—HL]—MARK HUFF, School of Forestry and Environmental Studies, and JOHN HORN, Department of Botany, both of Duke University, Durham, N.C. 27706.

CHAPEL HILL, N.C. (center: Columbia and Franklin Streets in Chapel Hill).

2 May. This year's count topped our record species total (134 last year) by two. Of greater interest was the greatly increased number of individual birds counted (1.58 times our previous high of last year). This is reflected almost equally throughout the list, rather than just with a few species. The greater number of field parties (24 versus 14 last year) as well as a higher total of party hours, coupled with the fact that we had more experienced birders this time and perfect weather, may provide major clues. Increased bird populations would certainly not seem indicated. The *Pectoral Sandpiper* (Robin Carter, Carlie Eastman) was the first for the count since 1950. Angelo Capparella and James Coman found 2 *American Bitterns* at University Lake; another was seen by Charles and Ella Newell at Hogan's Farm. The *Semipalmated Plover* and 2 *Water Pipits* were seen by James Pullman and Elizabeth Teulings. A late *Red-breasted Nuthatch* was clearly seen by Capparella and Coman. *Warbling Vireo* (Hal and Debbie Frazier) was first detected by song and then carefully studied; all field marks were seen. A *Philadelphia Vireo* was seen on 3 May by Annie Leigh Broughton; the bird had pale yellow underside from the throat to the legs, a stripe through the eye and light stripe above the eye, and no wing bars. Five *Red Crossbills* (Steve Graves) were carefully studied on 5 May. [This is the best organized spring count in the Carolinas, with 24 field parties divided into specific sectors, and even a printed, species-by-species count form showing the number of years each species has been seen on the last 17 spring counts! Very good details, most of which were submitted as described under the Durham count.—HL]—BARBARA ROTH, 7 Lone Pine Road, Chapel Hill, N.C. 27514.

GREENSBORO, N.C. (center: transmitter tower of Radio Station WBIG).

1 May. The number of species was down this year because of rain. The 2 *Sanderlings* (Compiler) were on the beach of a small suburban lake which had been all but drained. The buffy-red coloring on the back and breast, the relatively large size of the birds, the black legs, and rather heavy black bill were seen well.—DONALD ALLEN, 2611 David Caldwell Drive, Greensboro, N.C. 27408.

WINSTON-SALEM, N.C. (center: intersection of I-40 and Silas Creek Parkway).

1 May. The adult *Little Blue Heron* (Joe Neely) was a rare spring sighting, but the adult *Black-crowned Night Heron* (Charles Frost) on 27 April, seen on a dead tree limb over a pond, was the first record for Forsyth County. The immature *Yellow-crowned Night Heron,* seen by Pat Culbertson, was a streaked grayish bird, and the tarsus extending beyond the tail was seen as the bird was flying from a marshy area to a lake at Reynolda. *American Bittern,* seen by many observers on 5 May, was only the second county record. *Ring-necked Duck* (Bill and Susan Hammond) and *Marsh Hawk* (Gardner and Margaret Gidley) were late sightings on count day. *Common Gallinule* (Muriel Dennett and the Gidleys) was at a small reedy pond in the western part of the county. *Semipalmated Plover* was seen by many observers at the sewage treatment plant; however, because of the drought sandpipers were in much smaller numbers and species at this site, where shorebirds are usually numerous at the overflow basin. An unusually large number of *Solitary Sandpipers* seemed to be distributed throughout the county. Only one *Ringed Turtle Dove* was seen this spring; the species has steadily declined in the last 2 years although fledgling birds were found last year. Glenys Gallaher saw 2 *Yellow-bellied Flycatchers* in a pine tree on 2 May. The uniform yellow of the throat, breast, and belly was clearly seen, as were the yellow eye ring and yellowish wingbars. Late species included a *Winter Wren* (Fran Baldwin) on 30 April, a *Golden-crowned Kinglet* (Frost) on 27 April, and count day *Red-breasted Nuthatch* (Ruth Hill, Barbara Page, Peggy Cochrane) and *Hermit Thrush* (Com-

pilers). The singing *Long-billed Marsh Wren* (Bob Witherington, Bert Hollifield) was at the place where two were seen last spring. Three *Warbling Vireos* were seen during the count period or on count day by the Compilers, Glenys Gallaher, and Charles Frost; all were first heard singing and then observed. [Thank goodness the vireos were singing! I am skeptical of some sight records of non-singing Warbling Vireos in the Carolinas—HL] Rare warblers seen on the count or during count period [all convincingly described—HL] were *Golden-winged, Blue-winged, Tennessee, Nashville, Cerulean, Connecticut* (Barbara Page, Peggy Cochrane), and *Wilson's. Swainson's Warbler* (Zach Bynum) was seen on 30 April and 2 May along Salem Creek. [Are the Swainson's that have been seen on this count for the past several years all migrants, or is there a mid-piedmont breeding population here?—HL] The pair of *Brewer's Blackbirds* (Mary Eriksen) was seen on count day and again on 7 May at a yard feeder; female was grayish-brown with a dark eye, and male showed a green sheen with bluish-purple on the head. The warbler migration was very poor this spring, with no large waves or peak days. Also, the warblers arrived later than usual, as evidenced by the lack of *Blackpoll* and *Bay-breasted Warblers* on count day. [Excellent details for the many rare sightings, and the large number of count period birds shows that there are many observers who do not confine their birding activity to just two days a year.—HL]—FRAN M. BALDWIN, 1030 Englewood Drive, Winston-Salem, N.C. 27106 and RAMONA R. SNAVELY, 115 Plymouth Avenue, Winston-Salem, N.C. 27104.

STANLY COUNTY, N.C. (center: 2 miles NW of Badin).

15 May. Heavy precipitation made birding impossible during the afternoon. Nine *Cattle Egrets* (Vera Crook) were late for this area. The Compilers found a *Common Gallinule* at Lake Tillery on 16 May, clearly seeing the dark gray color and the red frontal shield. They also found an adult *Yellow-crowned Night Heron*, 3 *Sanderlings*, and 2 *Least Sandpipers* at the lake on 17 May. Sanderlings were twice the size of the Leasts, with the white wing stripe, stout bill, and characteristic call note detected. The *Saw-whet Owls* were seen by Naomi Goforth at the Scout Camp, where they have been seen and heard on several previous occasions. [I hope other birders can check out these owls there, especially since 15 May is very late for this species to be lingering in the piedmont.—HL] *Cliff Swallows* (Barrett Crook, Harold Morris, Johnny Hahn) were observed nesting under the Yadkin River Bridge near High Rock Dam. —DAVID and LIDA BURNEY, Route 2, Box 211, Albemarle, N.C. 28001.

IREDELL COUNTY, N.C. (center: South Yadkin River Bridge on Chipley Ford Road).

8 May. Weather was unseasonably cold (40-56°F), cloudy, and windy, and these factors hampered the count. Warblers, except for the unusually large number of *Northern Parulas*, were not as numerous as in past years. *Robins, Indigo Buntings, Eastern Bluebirds*, and *Mourning Doves* were abundant. *Common Grackles* were nearly twice as numerous as Starlings. The *Cliff Swallows* were seen by Bobby and Dick Mize.— JANE S. MULLEN, 4125 Camelot Drive, Apt. A-3, Raleigh, N.C. 27609.

CHARLOTTE, N.C. (center: intersection of South Boulevard and Woodlawn Road).

15 May. For the second consecutive year rain throughout most of the day prevented adequate coverage of the count area. Ironically, the rain predicted for the selected count day in early May failed to materialize, but the expected precipitation did cause us to postpone the count until a mid-May "rain date" on which we had an unwelcome deluge. The rain and the lateness of the count resulted in a very low species total for this area. [Only nine observers on a count near a city with the population of Charlotte is very disappointing, as is the total of 71 species. If the weather is good next spring, I hope to see dozens of observers on this count and well over 110 species. —HL] *Screech Owls* (Robert Schmitt) were represented by a single family group consisting of a red phase male, a gray phase female, and a red and a gray young.— DANIEL E. READ JR., 1101 Rosewood Circle, Charlotte, N.C. 28211.

GREENVILLE, S.C. (center: intersection of Highways 291 and 29).
8 May.—ROSA LEE HARDIN, Cleveland, S.C. 29635.

CLEMSON, S.C. (center: 3.5 miles SW of intersection of US 76 and SC 93 in Clemson).
4 May. The 143 species (exceeding the 1974 total by 7) was a truly remarkable count, considering that only five observers were in the field. Also, the spring migration here was nearly a week late; thus, we had not reached the peak of the warbler migration. Nearly all of the shorebirds were at farm ponds to the east of Pendleton, as Lake Hartwell was one-half foot above normal level. The Compiler and Kerry Reese heard a *Black Rail* calling from a marsh at Eighteenmile Creek at daybreak; *kee-kee-kurr* call was heard about a dozen times, but the bird could not be flushed. An adult was taken from a Screech Owl's nest in a Wood Duck box near this marsh in May 1975; thus, the possibility of breeding in the marsh is present. The 2 *Stilt Sandpipers* were found on farm ponds a mile apart near Pendleton by the Compiler and Bill Alexander. The rusty cheek and crown were very obvious, as were the barred underparts, bill with decurved tip, white rump, pale yellowish legs, and size slightly smaller than Lesser Yellowlegs. *Forster's Terns* (Sid Gauthreaux) were carefully studied at rest and in flight at Lake Hartwell; white primaries and white outer tail feathers were clearly seen. Compiler saw the *Least Flycatcher* and heard it giving the *whit* call in an overgrown field. Late sightings were a *Red-breasted Nuthatch* (Gauthreaux), a *Winter Wren* (Reese), and 10 *Purple Finches* (Reese). Reese also found a remarkably high 8 *Tennessee Warblers.* The swallow migration at Lake Hartwell, unpredictable from day to day, was in full swing on count day; noteworthy were the 190 *Bank*, 225 *Barn*, and 30 *Cliff Swallows* (all migrants).—HARRY E. LeGRAND JR., Department of Zoology, Clemson University, Clemson, S.C. 29631.

ELKIN-RONDA, N.C. (center: intersection of I-77 bypass and US 21, 3 miles N of Elkin).
1 May. The 2 *Northern Shovelers* were seen by Jerry Tysinger on a settlement pond approximately 200 yards from the Yadkin River. The rufous-red sides, white breast, and characteristic profile were clearly seen.—LIN HENDREN, P.O. Box 148, Elkin, N.C. 28621.

CALDWELL COUNTY, N.C. (center: Lenoir).
28 April. [Why so early?—HL]—HELEN E. MYERS, 320 Beall Street NW, Lenoir, N.C. 28645.

MOUNTAINS

BREVARD, N.C. (center: 5 miles SE of Brevard at Rich Mountain Lookout Tower).
1 May. This year's count was scheduled earlier than in any prior year, accounting for absences of species such as *Common Nighthawk, Eastern Kingbird, Acadian Flycatcher*, and *Eastern Wood Pewee. Red-shouldered Hawk* (Gaylord Lyon), only a migrant in this area, was a good find. Another rare migrant was the *Chuck-will's-widow*, heard by Norman Ellis. *Purple Martins* were finally reported on the count; this species migrates through every spring, goes in and out of bird houses for about a week, and then disappears. Other noteworthy species were *Gray-cheeked Thrush* (Art Wood), *Loggerhead Shrike* (the Hollands), *Prothonotary Warbler* (Doris Guest), and *Northern Waterthrush* (Betty McIlwain).—WALTER C. HOLLAND JR., 290 Maple Street, Brevard, N.C. 28712.

BUNCOMBE COUNTY, N.C. (center: intersection of US 70 and SR 2740 in Swannanoa).
1 May. *Prothonotary Warbler* (Mary Sawyer) was seen within 15 feet of the observer's dining room window; habitat was a mountain woodland, with a small stream and swamp about 700 feet away. The brilliant golden head, blue-gray wings, and white

under the tail were seen. The 2 male *Summer Tanagers* (Susan Rozelle) were on opposite sides of the lake at Camp Ridgecrest for Boys.—ROBERT RUIZ, 300 Wilson Avenue, Swannanoa, N.C. 28778.

AVERY COUNTY, N.C. (center: [not specified; apparently in the Grandfather Golf and Country Club vicinity.—HL]).

22 May. [This date falls a week later than the last date specified for conducting a CBC Spring Count. The count was accepted only because it censused a high mountain area.—HL] Three *Pied-billed Grebes* (Compiler, Kevin Wentworth) at Grandfather Lake were rather late. Pair of *Wood Ducks* (Compiler, Russell Pratt) was on the GGCC lake. *Sharp-shinned Hawk* (Compiler, Wentworth) was seen from the Grandfather Mountain toll road. A *Bobwhite,* somewhat unusual in the area, was heard calling in the campground area on Grandfather Mountain. A pair of *Brown Creepers* was building a nest at the GGCC clubhouse. *Cape May Warblers* were scarce this spring. *Least Flycatcher,* unusual in the region, was heard calling at the side of a fairway at the GGCC.—MARGERY PLYMIRE, Box 306, Linville, N.C. 28646.

FIELD OBSERVERS

MOREHEAD CITY, N.C.: John Fussell II, John Fussell III, Donna Goodwin, R.J. Hader, Kevin Hintsa, Don Hoss, Darryl Moffett, Eloise Potter, Allyn and Joanne Powell, McDuff Wade, David Whitehurst.

WILMINGTON, N.C.: Katherine Alexander, Edna Appleberry, Bobby Austin, Robert S. Brown, J.H. Carter, Dot Earle, Steve Everhart, Willard Greene, John Hardwick, Kitty Kosh, Harry Latimer, Greg Massey, Polly Mebane, Ann Nicholson, Frances Needham, James Parnell, Marty Pridgen, Mary Urich, Charlotte Waggett, Jeffrey Williams.

CHARLESTON, S.C.: Alston Badger, Ted Beckett, David Chamberlain, E.B. Chamberlain, Lynn Childers, E.C. Clyde, Teague Coleman, Robert Dunlap, Edmund Farrar, Julian Harrison, Bobbin and David Huff, Michael Hull, Curt Laffin, Pete Laurie, David Lourie, Gerald and Teddy Muckenfuss, Perry Nugent, Olgerts Puravs, Tom Reeves, Richard Roach, Susan Roche, Sarah Taylor.

BEAUFORT COUNTY, N.C.: Allen Alligood, Elizabeth Ball, Ethel Barkley, Faye Bennett, Geraldine Cox, Lauris Joyner, James McLaurin, Hugh Sterling, Elizabeth Sterling.

PAMLICO COUNTY, N.C.: Elizabeth Ball, Geraldine Cox, Robin Harding, Shirley Harding, Theresa Lafond, Ecky Meadows, Glenn Paul, Marvin Turnage.

DILLON COUNTY, S.C.: Marion McCallum, John H. Wilson.

FAYETTEVILLE, N.C.: Derb Carter Jr., Jay Carter, Jo Ann Courtney, Philip J. Crutchfield, Frances Rankin, Henry Rankin Jr., Neal Sellers, Tim Sweeney, Brad Thomason, Brian Wingate, Jack Wingate, Margie Wingate.

SOUTHERN PINES, N.C.: J.H. Carter III, L.M. Goodwin Jr., Marion Jones, James F. Parnell.

COLUMBIA, S.C.: Gilbert Bristow, Nina Reid, Kay Sisson, Alice Steinke, Mr. and Mrs. Jack Stewart, Emma Walker, Andy Witt.

ROANOKE RAPIDS, N.C.: Bill Collier, Ricky Davis, Kevin Hintsa, David Knapp, Ken Knapp, Mike Knapp, Merrill Lynch, Eloise Potter, Mike Tove.

RALEIGH, N.C.: Ricky Davis, Charlotte Green, R.J. Hader, George Hervey, Kevin Hintsa, Roberta Horton, Tom Howard, Ron and Eric Johnson, David Knapp, Ken Knapp, Michael Knapp, Josh Lee, Merrill Lynch, Chris Marsh, Jim Mulholland, Jane Mullen, Laura Nichols, Eloise Potter, Tom Quay, Mike Tove, Gail Whitehurst, Ray Winstead.

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AVERY COUNTY, N.C.: Tom Davis, Alvera Henley, Norma Massey, Margery Plymire, Russell Pratt, Sally Southerland, Juanita Sullivan, Kevin Wentworth.

CBC Roundtable

(Continued from Page 77)

Death Claims Two Club Members

T.M. Rial of Aiken, S.C., died 1 November 1976. Tom was an enthusiastic birder and dedicated conservationist who devoted much time and energy to CBC, Georgia Ornithological Society, and several other organizations with similar goals. "Big Bird" rarely missed a CBC meeting, and he resigned from his post on the Executive Committee only when forced to do so by failing health.

Mrs. Jack Willis of Ocracoke, N.C., also died recently. Fonnie was a gracious hostess to many visiting birders. Her final contribution to ornithology was an extensive revision of the Hyde County bird list incorporating many of her unpublished records.

New CBC President

Mrs. Tommy Dabbs of Sumter, S.C., has been confirmed by the Executive Committee as the new president of Carolina Bird Club. Evelyn succeeds F.M. (Pat) Probst, who will continue to edit the *CBC Newsletter.* According to Evelyn, the winter CBC meeting will be at Wilmington with headquarters on the UNC-W campus. Winston-Salem bird club members plan to host the spring meeting. Watch your *Newsletter* for full details.

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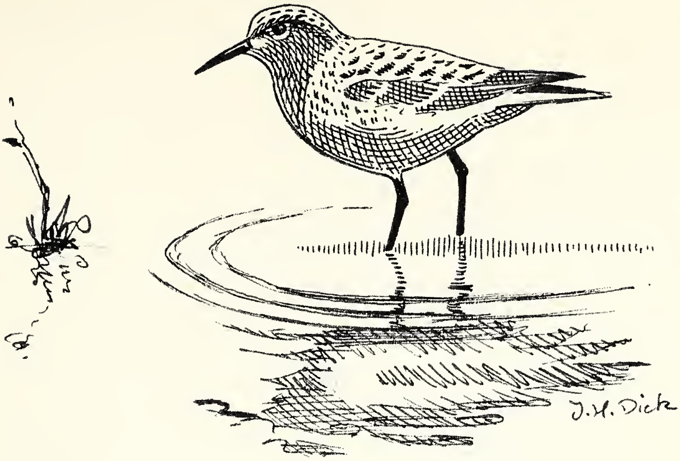

General Field Notes

JAMES F. PARNELL, Department Editor
Department of Biology, University of North Carolina at Wilmington,
Wilmington, N.C. 28401

JULIAN R. HARRISON, Associate Editor
Department of Biology, The College of Charleston, Charleston, S.C. 29401

Aerial Diving by Great Egrets

KITTY KOSH
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15 November 1975

On 4 November 1975 my two sons, John and Michael, told me that for several days they had been seeing some egrets acting peculiar at Greenfield Lake, Wilmington, N.C.

Schools of small fish were breaking the surface of the deep water in the center of the lake. The Great Egrets (*Casmerodius albus*) would fly from perches in cypress trees and hover about 4 to 6 feet above the water with necks and legs extended in a straight line. They would suddenly shift the legs downward and dive. The body and head hit the water at the same time. The wings were slightly raised and bent at the elbow so that the whole body did not submerge. When one rose with or without a fish, it would fly back to a tree and perch. Occasionally one would stay on the surface of the water and float for a minute or so, looking like a skinny swan. There were five egrets fishing.

Edna Appleberry and I watched four egrets diving on 5 November. On 6 November one egret was active. I counted 14 dives with five fish caught. On 10 November I saw two egrets diving.

By my observations the diving was obviously limited to the activity of the schools of fish. When the fish were inactive, the egrets stalked the shallow edges in a normal egret fashion.

[Dept. Ed.—This type of feeding behavior has been recorded for several species of long-legged waders. It appears, however, to be seldom used. I know of no previous reports of this behavior in North Carolina waders.]

Bald Eagle Seen in Forsyth County, N.C.

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10 November 1975

On 12 September 1975 a Bald Eagle (*Haliaeetus leucocephalus*) in full adult plumage was sighted in the southern part of Forsyth County. The magnificent bird was first seen at 0600 by Wayne E. Nifong, owner of a dairy farm. Mr. Nifong observed the eagle from approximately 100 yards. The bird was feeding on a dead carp beside a very muddy ½-acre "catch-basin" pond. When the bird became aware of Mr. Nifong's presence, it flew immediately to a large pine tree. The eagle returned several times to feed on the carp, always selecting a pine tree for perching between feedings.

Mr. Nifong notified the local newspaper, the *Winston-Salem Sentinel,* of the occurrence. The *Sentinel* sent a reporter, Dee Wilson, and a photographer, Allie Brown, to investigate the report. They, in turn, saw and photographed the eagle and then called the local Audubon Society for confirmation. Fran M. Baldwin and I drove immediately to the farm, arriving just as a violent thunderstorm broke. After waiting 30 minutes for the lightning to subside, we made a thorough investigation of the area in a heavy rainfall, but we were unable to locate the bird. Examination of the photographer's film negatives, however, left no doubt about the sighting.

We returned to the Nifong farm at daybreak the next day to recheck the area and to examine the remains of the carp. This investigation and visits on several subsequent days yielded no additional sighting or information.

This is the first confirmed sighting of a Bald Eagle in Forsyth County. One of the photographs submitted to document the occurrence appears on the cover of this issue of *The Chat.*

Limpkin Observed at Lake Waccamaw, N.C.

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9 September 1975

About 1730 on 7 September 1975, we watched a Limpkin (*Aramus guarauna*) for several minutes at the head of the Waccamaw River in Columbus County, N.C. The bird emerged from the shrubs at the edge of the swamp just below the small dam at the outlet of Lake Waccamaw. Although we did not have our binoculars with us, we could see the bird clearly about 30 yards away. It stalked erratically along the edge of the water, jabbed at the ground, and once picked up a dark object, perhaps a snail. As it walked, it periodically jerked its dark tail downward. When one of us approached within 20 yards, it flew to seclusion in the shrubs nearer shore. In flight, it held its neck stretched forward and down at an angle; its legs trailed behind; and its wings flapped stiffly above its back.

Its long, slender neck and long legs somewhat suggested a heron's shape, but its neck lacked the herons' double bend, and its beak, though not notably long or curved, did not taper strongly to a point like a heron's. Its size was near that of a Little Blue Heron (*Florida caerulea*). Its plumage was dark brown throughout, closely streaked with white on head, neck, and foreparts of the body. Its legs were blackish, its beak dark, paler toward the base. The white streaks in the plumage were distinctly visible at a distance of 20 yards. No other marks or white patches appeared on the under surface, rump, or flight feathers. Immature night herons, the only other brown waders of comparable size with white streaking, would have much different profiles and behavior, as well as spotted wings and paler legs. The jerking tail is particularly distinctive of Limpkins (A. Sprunt Jr. and E.B. Chamberlain, 1949, *South Carolina Bird Life*, Univ. South Carolina Press, Columbia).

Outside Florida in the southeastern states, the Limpkin occurs in small numbers in extreme southeastern Georgia (T.D. Burleigh, 1958, *Georgia Birds*, Univ. Oklahoma Press, Norman) and on rare occasions in coastal South Carolina (Sprunt and Chamberlain, *op. cit.*). *Audubon Field Notes* and *American Birds* report only three occurrences of this species since 1948 north of the Altamaha River, Georgia: one each in Tennessee (*Aud. Field Notes*, 15: 474), Maryland, and Virginia (*Amer. Birds*, 25: 717, 841), all in late spring.

At the time of our observation, we were aware that Limpkins would not be expected in North Carolina. Our account of the bird's behavior and appearance is summarized from our field notebook. Because we know the species well from several seasons in South America, we feel confident in our identification, although the absence of objective substantiation makes this record hypothetical.

[Dept. Ed.—This is the first report of a Limpkin occurring in North Carolina. With the publication of this record, this species can be placed on the hypothetical list for North Carolina.]

A Bridled Tern From North Carolina

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Received
2 October 1975

On 3 October 1971, after Hurricane Ginger, David Hughes and Gary Williamson found a Bridled Tern (*Sterna anaethetus recognita*) dead on the bridge at Oregon Inlet, Dare County, N.C. The bird, a female (ovaries 4x8 mm) weighing 90.6 g, was very emaciated, and the skull was crushed. It is in the bird collections at the North Carolina State Museum of Natural History (No. 4066). The identification was verified by Roxie C. Layborne of the U.S. National Museum of Natural History. Although this tropical species has been found offshore with some regularity in summer, this appears to be the first specimen actually obtained for the state. A second specimen, possibly blown ashore by the same storm, was found by Gilbert Grant, identified by Mrs. Laybourne, deposited in the National Museum of Natural History, and reported in *Chat* (37:23-24).

Spring Shorebirds at a Partially Drained Lake Near Fayetteville, N.C.

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Fayetteville, N.C. 28304

11 August 1975

The note by Pullman (Chat 38:39-40) suggests that similar data collected at Fayetteville, N.C., during April and May of 1975 might be useful.

McFayden Lake is an impoundment which is located about 1 mile NW of the city of Fayetteville in Cumberland County, N.C. Normally, the lake covers about 115 acres. It has been partially drained for two seasons. The lake presently covers approximately 20 acres with large areas of exposed sand and mud flats.

The period of observation for this report was from 22 April to 13 May 1975. All of the trips were made during the late afternoon or evening except the trip of 1 May which occurred during the morning. Observations were made with the aid of a pair of 7x50 binoculars. I was accompanied on 1 May by Henry Rankin Jr. and 6 May by Mr. Rankin and his daughter, Douglas Rankin, both of whom are experienced bird-watchers.

The shorebird observations are summarized in the following table:

SPECIES	DATES				
	22 April	29 April	1 May	6 May	13 May
Killdeer	0	2-4	2-4	2-4	2
Spotted Sandpiper	0	0	0	3-6	2-4
Solitary Sandpiper	1	3-6	2-4	2	0
Greater Yellowlegs	0	2-4	2	0	0
Least Sandpiper	0	25-30	5-6	0	0

The numbers given are approximate. The nature of the terrain made exact counts difficult. Two other impoundments were surveyed during this same period. One impoundment, Lake Rim, is located in Cumberland County off the Raeford Road. No shorebirds were seen. Forest Lake which is located in the city of Fayetteville off Raeford Road was also surveyed on each trip. Only one Solitary Sandpiper was found.

Although these species of shorebirds are not necessarily strangers to this area, their occurrence at a drained pond may be noteworthy from the point of view of concentration of numbers and species at inland sites.

Some Observations of the Common Raven as a Predator

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3 November 1975

There are few published reports of the food habits of the Common Raven (*Corvus corax*) population which exists in the southern Appalachians (Harlow et. al. 1975, Murray 1949). These studies, as well as studies in other sections of the United States, have concluded that ravens are primarily scavengers; but others have suggested that the raven may also be a predator (Craighead and Craighead 1956, White and Cade 1971, and Dorn 1972).

In late May 1974, I observed a lone raven capture a live snake on Tennent Mountain in the Balsam Range of Pisgah National Forest. My attention was first directed to the raven by its croaking calls, but its unusual behavior caused me to observe its activities closely through binoculars.

The raven repeatedly dropped to the ground and then flapped in a tight circle around a small, rocky area of the mountain. It was obvious that the raven was attempting to capture an animal of some kind, but the animal was not immediately in view. After six or seven passes, the raven flew away with a snake in its grasp. As the raven departed, the reflexive movements of the snake were clearly visible through binoculars indicating a live capture by the raven.

On 4 May 1975 I received a report from Shawn Knickerbocker, who at the time was completing a series of raven observations for the U.S. Forest Service. Knickerbocker reported seeing a raven dive into brush and capture a small mammal. His sighting was also on Tennent Mountain.

On other occasions in 1974 and 1975, I observed ravens flying low on the perimeter of areas that were being prescribed burned. My inclination was to interpret this behavior as a hunting activity, but it may have indicated curiosity or coincidence. For example, during the controlled burn on Graveyard Ridge in April 1975, I observed from one to three ravens flying low through or along the perimeter of the burn on three occasions, but no capture attempts were observed.

During the fall burn near Sam Knob on 5 November 1975, I observed 28 ravens near the burn, but none passed close enough to cause suspicion of hunting.

The large size of the raven certainly would enable it to function as a predator in situations where its beak could replace talons as a primary attack weapon. Small mammals and snakes are well within the size limits which it could dispatch.

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A Case of Suspected Double-broodedness in the Carolina Chickadee

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27 October 1975

The Carolina Chickadee (*Parus carolinensis*) is generally considered to be single-brooded. The species account in Bent's *Life Histories of North American Jays, Crows and Titmice* (U.S. Natl. Mus. Bull. 191, 1946, p. 344-352) makes no positive statement on the subject, but one brood per year is implied by the use of the expression "bred annually" on page 347. *South Carolina Bird Life* (1970, p. 375) quotes Wayne as saying that the species is single-brooded and reports full sets of eggs from "as early as" 23 March until "late April or even early May" in "backward seasons." *Birds of North Carolina* (1959, p. 258) states that April is the usual month for nesting and that eggs have been found at Raleigh, Wake County, N.C., from 3 April to 11 May.

In view of the above information, the nesting behavior of Carolina Chickadees in my yard near Zebulon, Wake County, N.C., during the 1975 breeding season seems worth reporting. On 15 February 1975, Jack Finch of Bailey, N.C., installed two of his excellent bluebird nest boxes on predator-proof metal poles at the edge of my yard adjoining the golf course. On 21 February a pair of Carolina Chickadees investigated one of the boxes. In March they drove Eastern Bluebirds (*Sialia sialis*) from the site. At mid-April the box contained a nest with six eggs, which hatched on 22 or 23 April. Young left the nest on 10 or 11 May. I removed the 3-inch-thick pad of nesting material on 11 May. It was made of green moss and well lined with white dog hair and tiny feathers. On 22 May I saw chickadees carrying material into the same box. On 3 July the adults were feeding several well-developed young birds. This brood apparently left the box while I was away from home on 5 July. After the box was no longer in use, I removed the nesting material. The pad of green moss was only 1½ inches thick, and it appeared to be unlined. A few bits of fur and feathers mixed in the moss probably were the remains of a thin lining trampled into the pad by the nestlings.

Although there is no absolute proof that the events described above represent two successive nestings by the same pair of birds, the permanent resident status of the Carolina Chickadee and the late date the nestlings were in the box strongly suggest the rearing of a second brood. Allowing 11 days for incubation and 17 days for young to remain in the nest places the time of laying about the first week in June, which would be extremely late for a replacement clutch by a species that normally lays its eggs in April. Certainly this unusually late nesting by the Carolina Chickadee demonstrates once again that we cannot assume everything is known about a species just because it nests in our own yard year after year.

ADDENDUM

During the 1976 breeding season two broods of Carolina Chickadees were reared in the same nest box described above. Building began at mid-March, and the nest was well lined when the male mounted the female on 28 March. This brood left the nest on or before 4 May. Construction of the second nest was first noted on 17 May. Young were out of the nest on 23 June but returned to the box for the night and left for good on 24 June. Both 1976 pads of nesting material were about 2 inches thick and contained a fairly good amount of lining material in addition to the moss.

Worm-eating Warblers in the South Carolina Coastal Plain in June

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Although breeding season records of Worm-eating Warblers (*Helmitheros vermivorus*) exist from the southern coastal plain in several states (A.O.U. 1957, Griscom and Sprunt 1957, Oberholser 1974, Lowery 1974, Imhof 1962, Pearson et al. 1959, Scott and Cutler 1963), a very few are from the lower coastal plain, within approximately 100 miles of the coast. Typical breeding habitat is described as forested hillsides and ravines with moderately dense understory (Griscom and Sprunt 1957, Bent 1953). One lower coastal plain locality where the bird breeds regularly, St. Francisville, Louisiana, (Kennedy 1974) is typical hilly habitat (S.A. Gauthreaux Jr., pers. comm.). An increasing number of recent records in atypical habitat indicates that the status of the species in the southern coastal plain, especially in the Carolinas, needs reëvaluation (Gauthreaux 1971). LeGrand (1975) gives the breeding status in the North Carolina coastal plain as very rare in the north to absent in the south, based on data complete through 1973. Two 1975 reports have since been added to the list of coastal plain records for that state (Lynch 1976, Fussell 1976).

Burton (in Supplement, Sprunt and Chamberlain, 1970, p. 621) lists the bird as a rare transient along the coast of South Carolina, 7 April-5 May. Sprunt and Chamberlain (1970, p. 437) mention two of A.T. Wayne's records as possible indications of breeding in the coastal plain, but concur with Burton that the species is a transient in spring, April-May, and fall, July-October. We here present evidence that this species is a probable breeder in the South Carolina coastal plain.

On 8 June 1976, in Berkeley County, S.C., Hamel observed a singing male *H. vermivorus* at 0845 for more than 60 seconds with 8x30 binoculars at a distance of 30 feet. All field marks were clearly visible. The location is 2.5 miles S of Shuler and 1800 feet NW of the point where Halfway Creek crosses county road 98, Halfway Creek Road, in the Francis Marion National Forest. On 22 June 1976 Lennartz observed a non-singing individual for 20 seconds with 10x50 glasses at 25 to 30 feet approximately 1200 feet WNW of the first sighting.

The habitat is a relatively dry forest intersected by a small drain (Halfway Creek) about 5 feet wide. The forest has a mature overstory of scattered loblolly pine (*Pinus taeda*); a maturing midstory of sweetgum (*Liquidambar styraciflua*), black gum (*Nyssa sylvatica*), and water oak (*Quercus nigra*), which reaches the height of the loblolly crowns; and an understory of red maple (*Acer rubrum*), sweetgum, cane (*Arundinaria gigantea*), *Lyonia lucida*, pepperbush (*Clethra alnifolia*), wax myrtle (*Myrica cerifera*), and grape vines (*Vitis* sp.). On 8 June the bird sang and foraged from perches between 2 to 8 feet in a moderately dense thicket of water oak saplings, wax myrtle shrubs and grape vines. It could be heard singing from National Forest Road 161 before 0800. The bird continued singing until at least 0900 when the observer had to leave the area to engage in other work. On 22 June Lennartz noted a bird after having found a singing male Swainson's Warbler (*Limnothlypis swainsonii*). This *H. vermivorus* was leaf-gleaning about 5 feet up in an understory shrub. It moved out to the end of a branch where it hung upside down foraging, its striped head plainly visible, before it moved out of sight. These are the first June records of this warbler in the South Carolina coastal plain of which we are aware.

While these and the other recent records of the Worm-eating Warbler from the Gulf coastal plain and the Atlantic coastal plain south of the Dismal Swamp may indicate an increase in the intensity of fieldwork in these areas, they also suggest the possibility that this species may be expanding its breeding range to include southern coastal plain habitats as well as more northern ones.

This fieldwork was supported by grants from the U.S. Forest Service, the Charleston, S.C., Natural History Society, and the National Audubon Society to Hamel. Harry LeGrand and Sidney Gauthreaux made helpful suggestions on the manuscript.

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Probable Breeding of the Red Crossbill in the North Carolina Sandhills

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6 August 1975

The Red Crossbill (*Loxia curviostra*) is an erratic wanderer, and evidence of its breeding in North Carolina is mostly restricted to higher elevations in the mountains (Johnston 1963, Stupka 1963, Simpson 1974). Sykes (1974) reported probable breeding in Wake County in the spring of 1967.

On 1 September 1974, I saw an adult female and a juvenile Red Crossbill near Southern Pines, Moore County, N.C. The birds were watched for several minutes in a large loblolly pine (*Pinus taeda*) bordering a small lake in a residential area. The female was observed feeding the juvenile on several occasions. The juvenile was heavily streaked with dark brown and had brown wings. Its bill was not noticeably crossed. It was capable of sustained flight. The young bird spent most of its time loudly begging for food from the female; however, it was seen trying to obtain seeds from cones by itself on at least one occasion.

Red Crossbills were first recorded in the North Carolina Sandhills on 15 November 1969, and lingered until 2 June 1970 (Carter 1971). They were also present from 18 December 1972 to 7 June 1973 and from 13 November 1973 to 19 May 1974. None were recorded from June through August 1974. Following the 1 September 1974 sighting, a single Red Crossbill in green plumage was seen in the same area on 9 September 1974 and 6 and 7 January 1975. At least one Red Crossbill was heard on 8 July 1975 in the nearby Fort Bragg Military Reservation (2 miles NE of the juvenile's location).

The Red Crossbill is now a visitor throughout the year in the North Carolina Sandhills, and most are seen from November through May. During the summer of 1974, it is highly probable that Red Crossbills bred in the Sandhills region.

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Stupka, A. 1963. Notes on the birds of Great Smoky Mountains National Park. Knoxville, Univ. of Tenn. Press.
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[For additional evidence of breeding by Red Crossbills in North Carolina outside the mountains, see Briefs for the Files, page 105 in this issue of *The Chat*.—ED.]

BRIEFS FOR THE FILES

Compiled by ROBERT P. TEULINGS
Route 2, Chapel Hill, N.C. 27514
(All dates 1976)

WILSON'S STORM-PETREL: Three were noted off Oregon Inlet, N.C., on 5 May by Joe Hudick.

WHITE PELICAN: One was present 25-26 May at Pea Island N.W.R. on the North Carolina Outer Banks, reported by Larry Lewis (fide N.R. Williamson).

GREAT CORMORANT: An adult was seen at Cape Lookout, N.C., on 25 March by Joel Clark.

DOUBLE-CRESTED CORMORANT: Inland occurrences of single birds were noted at Raleigh's Lake Johnson on 1 May by Joshua Lee and at City Lake, Rocky Mount, N.C., on 25 May by Steve Howell.

LITTLE BLUE HERON: Individuals were noted as locally rare spring visitors at Southern Pines, N.C., on 29 April by Jay Carter and at Pendleton, S.C., on 22 May by Harry LeGrand.

GREAT EGRET: Two were found inland near Eden, N.C., on 11 April by Edward Burroughs.

LOUISIANA HERON: One was observed on 16 May at Pendleton, S.C., by Sidney Gauthreaux, an apparent first spring record for that western piedmont locality. Another was seen inland near Raleigh, N.C., on 20 May by David Whitehurst.

WHITE IBIS: A flock of 15 was seen on the Roanoke River SE of Scotland Neck in Halifax County, N.C., on 29 May by Merrill Lynch.

GLOSSY IBIS: An unexpected piedmont record was reported from Winston-Salem, N.C., where two birds were seen on 5 May by Robert Odear (fide Ramona Snavely).

ROSEATE SPOONBILL: An immature was observed and photographed at Baruch Plantation, Georgetown County, S.C., on 7 April by Stu Ballard. Another individual, or quite possibly the same bird, was seen later at Huntington Beach State Park on 3 June, fide F.M. Probst.

FULVOUS TREE DUCK: One was seen at Bulls Island, S.C., on 15 April by F.M. Probst.

LESSER SCAUP: A late straggler was seen at Brookgreen Gardens near Murrells Inlet, S.C., on 2 June by F.M. Probst.

RING-NECKED DUCK: A late occurrence of two pairs was noted near Weldon, N.C., on 28 May by Merrill Lynch.

HOODED MERGANSER: A single female was seen near Pendleton, S.C., on 11 May by Sidney Gauthreaux and Harry LeGrand.

SURF SCOTER: Three were seen at Long Beach, N.C., on 30 May by Mike Tove.

BLACK SCOTER: A late lingerer was noted near Davis, N.C., on 1 June by John Fussell.

SWALLOW-TAILED KITE: A good count of 12 was recorded at Fairlawn Plantation, Charleston County, S.C., on 17 April by Sidney Gauthreaux.

COOPER'S HAWK: A nesting pair brooding eggs was found at Magnolia Gardens near Charleston, S.C., on 1 March by Ted Beckett. Individuals thought to be possible breeding residents were seen at Clemson, S.C., on 12 May and Pendleton, S.C., on 15 May by Harry LeGrand.

BROAD-WINGED HAWK: Two were seen in I'on Swamp, Francis Marion National Forest, S.C., on 4 April by Perry Nugent. Another uncommon coastal plain occurrence was noted near Clarkton, N.C., where an individual was seen on 6 May by David Lee.

GOLDEN EAGLE: One was observed in Uwharrie National Forest, Montgomery Co., N.C., on 25 March by Barbara Lee, and another in the Shining Rock Wilderness Area, Haywood Co., N.C., on 2 April by Mike Tove. On the coast, an adult was present at Topsail Island, N.C., during the first week of June, observed by Will Thomson (fide David Lee).

BALD EAGLE: An adult and immature were seen on 25 April in the Santee Coastal Reserve near McClellanville, S.C., by Perry Nugent. Elsewhere an immature was sighted near Raleigh, N.C., on 18 April by James Mulholland and another at Morehead City, N.C., on 25 May by John Fussell.

PEREGRINE FALCON: One was present as late as 9 May at Oregon Inlet on the North Carolina Outer Banks, observed by Robin Carter et al.

SORA: A late transient was seen at Clemson, S.C., on 17 May by Harry LeGrand. At Asheville, N.C., observers were surprised to find an individual out of its normal habitat in a residential neighborhood on 10 April, fide Royce Hough.

PURPLE GALLINULE: One was an uncommon visitor found at Lake Wheeler near Raleigh, N.C., on 13 May by Robert Hader.

SEMIPALMATED PLOVER: An estimated 400 were seen among a large concentration of shorebirds at Oregon Inlet, N.C., on 18 May by Richard Rowlett and Robert Ake. At inland locations in North Carolina, spring migrants were observed at Eden, Fayetteville, North Wilkesboro, Raleigh, Southern Pines, and Winston-Salem.

BLACK-BELLIED PLOVER: Nine were seen on 25 May at a drained pond site near Eden, N.C., by Ed Burroughs. Another inland visitor was found on 8 May at Raleigh, N.C., by Clark Olson.

RUDDY TURNSTONE: An estimated 1200 were seen at Oregon Inlet on the North Carolina Outer Banks on 18 May by Richard Rowlett and Robert Ake.

WHIMBREL: A rare inland occurrence of 20 was noted at Hibernia Point, Kerr Lake, Vance County, N.C., on 24 May by Ron Johnson, Howard Stewart, and Steve Henson.

WILLET: An uncommon inland sighting of a single bird was recorded on 7 May near Eatons Ferry bridge at Lake Gaston in Warren County, N.C., by Merrill Lynch, Kevin Hintsa and Mike Tove.

UPLAND SANDPIPER: An early spring migrant was found on the Clemson University campus, Clemson, S.C., on 8 April by Harry LeGrand. At Raleigh, N.C., one was seen on 10 April by Ken Knapp and later several were seen there on 17 May by Clark Olson.

PECTORAL SANDPIPER: Three were seen near Eden, N.C., on 22 May by Edward and Carol Sue Burroughs, a first local record. Other inland sightings were noted at Chapel Hill, N.C., and Pendleton, S.C., with 10 recorded at the latter location on 16 May by Sidney Gauthreaux.

WHITE-RUMPED SANDPIPER: Fifteen were unusual inland visitors at Pendleton, S.C., on 16 May and a lingerer was still present there on 29 May, reported by Sidney Gauthreaux.

BAIRD'S SANDPIPER: Two were seen at Mt. Pleasant, S.C., on 29 March by John Lynnes (fide Perry Nugent).

LEAST SANDPIPER: A count of 2000 was recorded at Oregon Inlet, N.C., on 18 May by Richard Rowlett and Robert Ake. Eight inland migrants were noted on 29 April at Seaforth marsh, Chatham County, N.C., by Robin Carter and Stanley Alford, and other inland sightings were reported from North Wilkesboro, N.C., and Pendleton, S.C., during the spring period.

CURLEW SANDPIPER: An individual in nearly full breeding plumage was observed and photographed at Oregon Inlet, N.C., on 18 May by Richard Rowlett.

DUNLIN: Over 8500 were among massive numbers of shorebirds found at Oregon Inlet, N.C., on 18 May by Robert Ake and Richard Rowlett.

SEMIPALMATED SANDPIPER: Large flocks totalling an estimated 17,500 migrants were seen on the North Carolina Outer Banks at Oregon Inlet on 18 May by Richard Rowlett and Robert Ake.

SANDERLING: The above-mentioned concentration of shorebirds at Oregon Inlet, N.C., on 18 May included at least 3500 Sanderlings as reported by Robert Ake and Richard Rowlett.

BLACK-NECKED STILT: One was found at Magnolia Gardens near Charleston, S.C., as early as 3 April by Michael Hull and Edmund Farrar.

NORTHERN PHALAROPE: Four were seen feeding at the Oregon Inlet, N.C., sandflats on 18 May by Richard Rowlett and Robert Ake.

PARASITIC JAEGER: One was seen off Atlantic Beach, N.C., on 4 April by Robert Holmes.

BONAPARTE'S GULL: Up to 15 inland migrants were seen at Lake Benson near Raleigh, N.C., on 3 April and at least 30 at Clemson, S.C., on 9 April by Sidney Gauthreaux.

LAUGHING GULL: An individual was sighted at Lake Hartwell near Clemson, S.C., on 13 May by Harry LeGrand, a rare inland spring record for that locality.

CASPIAN TERN: Two were seen inland on 17 April and one on 27 April by Harry LeGrand at Clemson, S.C. Several sightings were recorded in the Raleigh, N.C., area during the spring season highlighted by a count of 14 on 28 March by David Whitehurst.

COMMON TERN: A flock of 35 was seen at Roanoke Rapids Lake near Vultare, N.C., on 7 May by Kevin Hintsa, Merrill Lynch, and Mike Tove. Another inland visitor was observed at Clemson, S.C., on 1 May by Harry LeGrand.

SANDWICH TERN: Early arrival of 12 was noted on 9 April at Cape Hatteras, N.C., by Joe Hudick.

MOURNING DOVE: A full albino was seen on 12 April at Bethania in Forsyth County, N.C., by Charles Frost et al.

GROUND DOVE: Nesting has been reported at Topsail Island, N.C., by Will Thomson (fide David Lee). The species may be breeding as far north as Bogue Banks along the North Carolina coast where an individual was seen at Fort Macon State Park on 25 April by Robert Hader.

BUDGERIGAR: According to a local newspaper report, four were present at the coastal community of Atlantic in Carteret County, N.C., during May (fide John Fussell). At North Litchfield Beach, S.C., a flock of nine was seen on 14 May by F.M. Probst.

SHORT-EARED OWL: One was observed at close range, perched and in flight, at North Wilkesboro, N.C., on 29 April by Wendell Smith. Although this species is a regular winter resident along the coast, inland occurrences are rare.

EASTERN KINGBIRD: First spring arrivals were noted as early as 10 April at Rocky Mount, N.C., by Louis Fink and on 11 April at Southern Pines, N.C., by Jay Carter.

ALDER FLYCATCHER: A singing male was found by a CBC field trip party (Joshua Lee, Walter Holland et al.) on 22 May in Haywood County, N.C., adjacent to the Shining Rock Wilderness Area off the Blue Ridge Parkway near milepost 420. The characteristic "fee-bee-o" song was heard. It could not be determined whether the bird was on an established territory.

LEAST FLYCATCHER: Two migrants were found at Reynolda Park in Winston-Salem, N.C., on 6 May by Fran Baldwin and Ramona Snavely.

BANK SWALLOW: Two late transients were seen on 25 May at Lake Wheeler near Raleigh, N.C., by Chris Marsh and Mike Tove.

SHORT-BILLED MARSH WREN: Inland observations of spring migrants were reported from North Wilkesboro, N.C., where an individual was seen on 17 April by Wendell Smith and from Clemson, S.C., where three were found in early May by Harry LeGrand.

WOOD THRUSH: One was noted as early as 29 March at Clemson, S.C., by Sidney Gauthreaux and Kenneth Able.

SWAINSON'S THRUSH: At Winston-Salem, N.C., a late transient was observed on 30 May by Fran Baldwin, Wayne Irvin, and Kevin Hintsa.

WATER PIPIT: A late-lingering flock of five winter visitors was seen at Charleston, S.C., on 2 May by Perry Nugent.

PHILADELPHIA VIREO: One was recorded as a rare spring transient at Chapel Hill, N.C., on 3 May by Annie Leigh Broughton, and another at North Wilkesboro, N.C., on 20 May by Wendell Smith.

PROTHONOTARY WARBLER: An early individual was present on 5 April in Uwharrie National Forest, Montgomery County, N.C., observed by Barbara Lee.

WORM-EATING WARBLER: An early migrant was recorded on 5 April in Uwharrie National Forest, Montgomery County, N.C., by Barbara Lee. Four were seen on 17 April in South Carolina's Four Holes Swamp by Peter Laurie and Perry Nugent.

TENNESSEE WARBLER: An early transient was seen at Raleigh, N.C., on 7 April by Gail Whitehurst.

ORANGE-CROWNED WARBLER: Two early and uncommon spring visitors were recorded at Clemson, S.C., on 7 April by Sidney Gauthreaux, and another was seen there by the same observer on 19 April.

NASHVILLE WARBLER: Single migrants were noted at Winston-Salem, N.C., on 3 May by Royce Hough and at Raleigh, N.C., on 4 May by Mike Tove and Kevin Hintsa.

NORTHERN PARULA: An unusually early 24 March sighting was recorded at Raleigh, N.C., by Kevin Hintsa.

MAGNOLIA WARBLER: One was seen as late as 30 May at Winston-Salem, N.C., by Fran Baldwin, Kevin Hintsa, and Wayne Irvin.

CAPE MAY WARBLER: Late individuals were seen on 23 May at Morehead City, N.C., by John Fussell and on 1 June at North Litchfield Beach, S.C., by Renee Probst.

BLACK-THROATED GREEN WARBLER: One was recorded as early as 31 March at Raleigh, N.C., by Kevin Hintsa.

CERULEAN WARBLER: Single migrants were observed at Clemson, S.C., on 16 April and 20 April by Harry LeGrand; two at Chapel Hill, N.C., on 26 April by Robin Carter; one at Winston-Salem, N.C., on 3 May by Fran Baldwin and party; and one at Huntington Beach, S.C., on 22 May by Jim and David McConnell.

BLACKBURNIAN WARBLER: A late transient was seen on 30 May at Winston-Salem N.C., by Fran Baldwin et al.

CHESTNUT-SIDED WARBLER: A late migrant was recorded at Raleigh, N.C., on 23 May by Jan Heard.

NORTHERN WATERTHRUSH: One was found as late as 30 May at Winston-Salem, N.C., by Fran Baldwin, Wayne Irvin, and Kevin Hintsa.

KENTUCKY WARBLER: An early individual was present on 5 April in Uwharrie National Forest, Montgomery County, N.C., observed by Barbara Lee.

CONNECTICUT WARBLER: One was seen along the Blue Ridge Parkway near

Oteen, N.C., on 8 May by Jim McConnell. Other individuals were observed at Seneca, S.C., on 12 May by Paul Hamel and at Clemson, S.C., on 13 May by Harry LeGrand.

BOBOLINK: A late migrant was seen on 30 May in Halifix County, N.C., by Merrill Lynch.

DICKCISSEL: Two singing males were found at Pendleton, S.C., on 16 May by Sidney Gauthreaux. Another individual was observed near Clemson, S.C., on 21 May by Harry LeGrand.

PURPLE FINCH: Two late-lingering males were seen at a feeder in Winston-Salem, N.C., on 27 May by Barbara Page.

RED CROSSBILL: At Raleigh, N.C., Gail Whitehurst observed a pair of adults feeding three fledged young on 20 April, and another pair with a fledgling was

(Continued on Page 110)

BOOK REVIEW

Bird Sounds

Gerhard A. Thielcke. 1976. Ann Arbor Science Series. University of Michigan Press, Ann Arbor, Michigan. 190 p., ill. $6.96, paperback $2.95.

This is a concise, well organized, modestly priced book with little duplication of other recent books on avian vocalization. Most of the information presented is based on studies of European birds (over a third of the references cited are German), and perhaps its main value is to acquaint the reader with research efforts being conducted on the other side of the Atlantic. Much of this derives from Thielcke's own studies, and as an active researcher he is able to provide insight into the interpretation of bioacoustical research and provide excellent examples of the concepts discussed. A fair number of these appear to be from Thielcke's unpublished observations, and his enthusiasm for interpreting bird sounds is apparent even to the most casual reader.

The opening chapters provide a good summary of the present methods and goals of the study of avian sounds, but are somewhat marred by jargon. The chapter on calls is excellent. Most researchers have focused their attention on species-specific songs of male passerines, and consequently most books on bird sounds contain very limited discussions of the ethological role of calls. Subjects which have been treated in detail by other authors have been wisely limited to a few paragraphs, and the reader is referred directly to their works.

This book was first published in 1970 (Vogelstimmen, Springer-Verlag, Berlin-Heidelberg-New York) and a lot of pertinent ornithological research has taken place in the 6 years between publication and the appearance of this translation. Consequently, the book is not as current as its publication date would imply. Some minor problems appear to be artifacts of translation. I found the consistent use of words like "born" for "hatched" to be annoying. Apparently no attempt was made to match many of the German terms with their English counterparts, and I fear this will only perpetuate a major problem faced by the young science of bioacoustics —a general lack of standardization of terminology.

Finally, those of us who grew up thinking that buzzard is synonymous with vulture, that blackbirds are Icterids, and that yellow hammers are large woodpeckers, had best keep a field guide to European birds handy while reading this book.—DAVID S. LEE, North Carolina State Museum of Natural History

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seen by Ron Johnson at his Raleigh feeder on 24 May. Evidence of early spring breeding was also reported from Southern Pines, N.C., where three juveniles were seen in the company of two adults at Weymouth Woods Nature Preserve on 15 May by Jay Carter.

HENSLOW'S SPARROW: One was a good find at Clemson, S.C., on 10 April by Harry LeGrand.

SHARP-TAILED SPARROW: Rare inland occurrences were recorded in piedmont South Carolina by Harry LeGrand who observed an individual near Pendleton on 17 May and two birds at Clemson on 21 May.

LINCOLN'S SPARROW: An individual was seen in the Clemson, S.C., area in early April by Harry LeGrand and another at Raleigh, N.C., on 8 May by Clark Olson.

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Apr. 1976

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